UNIVERSUM

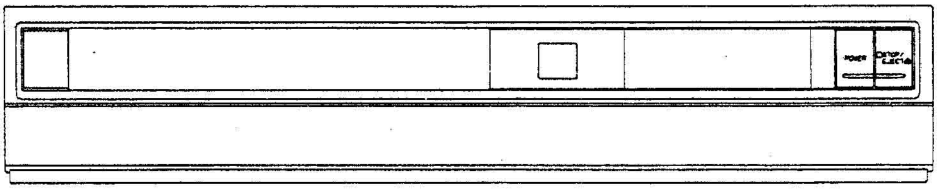
VHS PAL HQ

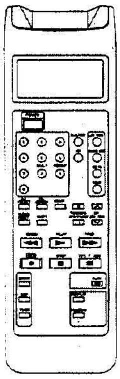
SERVICE MANUAL

SVM-P13-008-1E
68139 - 132 - 108

MODEL : VR4633/VR4632 VR4631

VIDEO CASSETTE RECORDER





SPECIFICATIONS

Format:	VHS PAL standard
Video Recording System :	Double Azimuth 4 Rotary Heads Luminance ; FM Azimuth recording Color ; Down converted subcarrier phase shifted
Television System :	CCIR Standard (PAL B/G System)
Color System :	PAL, MESECAM
Tape Width :	12.65 mm (1/2 inch)
Tape Speed :	SP ; 23.39 mm/sec LP ; 11.69 mm/sec
Recording/Playback Time :	SP ; 4 hours with E-240 type LP ; 8 hours with E-240 type
FF/REW Time :	Less than 6 min. with E-180
Heads :	Video ; Double azimuth 4 rotary heads Audio/Control ; 1 stationary head Erase ; 1 full track erase
VIDEO	
Input :	0.5 to 2.0 Vp-p ; 75 ohm unbalanced
Output:	1.0 Vp-p : 75 ohm unbalanced
Signal-to-Noise Ratio :	Better than 43 dB (SP) Better than 40 dB (LP)
Horizontal Resolution :	More than 240 Lines (SP) More than 220 Lines (LP)

AUDIO	
Input :	Line ; -8 dBm, 50 K Ω unbalanced
Output :	Line ; -6 dBm, 1 K Ω unbalanced
Wow-Flutter (WTD):	0.4 % Max (SP) 1.2 % Max (LP)
Frequency Response :	100 Hz ~ 8 KHz
Receiving Channel :	VHF LOW, VHF HIGH, UHF
Power Requirement :	220 ~ 240V AC/50Hz
Power Consumption :	Approx. 30 watts
Operation Temperature :	41 ° F ~ 104 ° F (5 ° C ~ 40 ° C)
Operation Humidity :	10 % ~ 75 %
Weight :	5.5 Kg
Dimensions :	420 (W) x 80 (H) x 315 (D) mm

The above specifications are on the basis of VR4633.

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APR. 1993

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1. GENERAL DESCRIPTION

1-1. SAFETY PRECAUTIONS

1. Before returning a Video Cassette Recorder to the customer, always make a safety check of the entire instrument , including, but not limited to the following items :

a. Be sure that no built-in protective devices are defective and/or have been defeated during servicing.

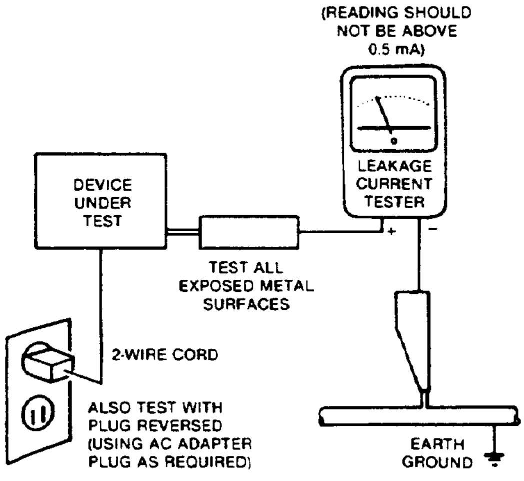
(1) Protective shields are provided on this chassis to protect both the technician and the customer. Correctly replace all missing protective shields, including any removed for servicing convenience.

(2) When reassembling the instrument, be sure to put back in place all protective devices, including, but not limited to nonmetallic control knobs, insulating, fish papers adjustment and compartment covers/shields, and isolation resistor/capacitor networks.
Do not operate this instrument or permit it to be operated without all protective devices correctly installed and functioning.

b. Be sure that there are no cabinet openings through which an adult or child might be able to insert their fingers and contact a hazardous voltage. Such openings include, but are not limited to, (1) excessively wide cabinet ventilation slots, and (2) improperly fitted and/or incorrectly secured cabinet covers.

c. Antenna Cold Check - With the instrument AC plug removed from any AC source, connect an electrical jumper across the two AC plug prongs. Place the instrument AC switch in the on position. Connect one lead of an ohmmeter to the AC plug prongs tied together and touch the other ohmmeter lead in turn to each tuner antenna input exposed terminal screw and, to each of the coaxial connectors.

If the measured resistance is less than 1.0 megaohm or greater than 5.2 megaohm, an abnormality exists that must be corrected before the instrument is returned to the customer. Repeat this test with the instrument AC switch in the off position.


(READING SHOULD NOT BE ABOVE 0.5 mA)
LEAKAGE CURRENT TESTER
+
-
DEVICE UNDER TEST
TEST ALL EXPOSED METAL SURFACES
2-WIRE CORD
ALSO TEST WITH PLUG REVERSED (USING AC ADAPTER PLUG AS REQUIRED)
EARTH GROUND

AC Leakage Test

d. Leakage Current Hot Check - With the instrument completely reassembled plug the AC line cord directly into a 220 (240V-UK) AC outlet. (Do not use an isolation transformer during this test). Use a leakage current tester or a metering system that complies with American National Standards Institute (ANSI) C101. 1 Leakage Current for Appliances and Underwriters Laboratories (UL) 1410, (50. 7). With the instrument AC switch first in the on position and then in the off position, measure from a known earth ground (metal waterpipe, conduit, etc) to all exposed metal parts of the instrument (antennas, handle bracket, metal, etc), especially any exposed metal parts that offer an electrical return path to the chassis.
Any current measured must not exceed 0.5 milliamp.
Reverse the instrument power cord plug in the outlet and repeat test.

ANY MEASUREMENTS NOT WITHIN THE LIMITS SPECIFIED HEREIN INDICATE A POTENTIAL SHOCK HAZARD THAT MUST BE ELIMINATED BEFORE RETURNING THE INSTRUMENT TO THE CUSTOMER OR CONNECTING ANTENNA OR ACCESSORIES.

e. AC Leakage Test
Avoid shock hazards. The television instrument, accessory, or cables (s) to which this VCR is connected should have the applicable sections of the leakage resistance antenna cold check and the leakage current hot check performed. Do not connect this VCR to a TV antenna, cable or accessory that exhibits excessive leakage currents.

2. Read and comply with all caution and safety related notes on or inside the VCR cabinet and chassis.

3. Design Alteration Warning-Do not alter or add to the mechanical or electrical of this Video Cassette Recorder. Design alterations and additions, including, but not limited to circuit modifications and the addition of items such as auxiliary audio and/or video output connections, might alter the safety characteristics of this instrument and create a hazard to the user. Any design alterations or additions may void the manufacturer's warranty and may make you, the servicer responsible for personal injury or properly damage resulting therefrom.

4. Observe orignal lead dress. Take extra care to assure correct lead dress in the following areas : a) near sharp edges, b) near thermally hot parts-be sure that leads and components do not touch thermally hot parts, c) the AC supply, and d) antenna wiring. Alway inspect in all areas for pinched, out-of place, or frayed wiring between components and the printed circuit board.
Check AC power cord for damage.

5. Components, parts, and/or wiring that appear to have overheated or are otherwise damaged should be replaced with components, or wiring that meet original specifications. Additionally, determine the cause of overheating and/or damage and, if necessary, take of corrective action to remove any potential safety hazard.

6. Product Safety Notice

Some electrical mechanical parts have special safety related characteristics which are often not evident from visual inspection, nor can protection they give necessarily be obtained by replacing them with components rated for higher voltage, wattage, etc. Parts that have special safety characteristics are identified by a (*) or (⚠) on schematics and parts list. Use of a substitute replacement that does have the same safety characteristics as the recommended replacement part might create shock, fire, and/or other hazards.
Products safety is under review continuously and new instructions are issued whenever appropriate.

Electrostatically Sensitive (ES) devices

Some semiconductor (solid state) devices can be damaged easily by static electricity. Such components commonly are called Electrostatically Sensitive (ES) Devices. Examples of typical ES devices are integrated circuits and some field-effect transistors and semiconductor "chip" components. The following techniques should be used to help reduce the incidence of component damage caused by static electricity.

1. Immediately before handling any semiconductor component or semiconductor-equipped assembly, drain off any electrostatic charge on your body by touching a known earth ground. Alternatively, obtain and wear a commercially available discharging wrist strap device, which should be removed for potential shock reasons prior to applying power to the unit under test.

2. After removing an electrical assembly equipped with ES devices, place the assembly on a conductive surface such as aluminum foil, to prevent electrostatic charge buildup or exposure of the assembly.

3. Use only a grounded-tip soldering iron to solder or unsolder ES devices.

4. Use only an anti-static type solder removal device. Some solder removal devices not classified as "antistatic " can generate electrical charges sufficient to damage ES devices.

5. Do not use freon-propelled chemicals. These can generate electrical charges sufficient to damage ES devices.

6. Do not remove a replacement ES device from its protective package until immediately before you are ready to install it. (Most replacement ES devices are packaged with leads electrically shorted together by conductive foam, aluminum foil or comparable conductive foam, aluminum foil or comparable conductive material).

7. Immediately before removing the protective material from the leads of a replacement ES device, touch the protective material to the chassis or circuit assembly into which the device will be installed.
CAUTION : Be sure no power is applied to the chassis or circuit, and observe all other safety precautions.

8. Minimize bodily motions when handling unpackaged replacement ES devices. (Otherwise harmless motion such as the brushing together of your clothes fabric or the lifting of your foot from a carpeted floor can generate static electricity sufficient to damage an ES device).

SPECIAL NOTE
All integrated circuits and many other semiconductor devices are electrostatically sensitive and therefore require the special handling techniques described under the "electrostatically sensitive (ES) devices" section of this service manual.

NOTE
Do not use the part number shown on this drawing for ordering. The correct part number is shown in the parts list. And may be slightly different or amended since this drawing was prepared.

IMPORTANT SAFETY NOTICES
Components identified with the mark ⚠ have the special charateristics for safety when replacing any of these components. Use only the same type.

1-2. GENERAL INFORMATION

- **VISS**

  -Index Search System
  Index search system is the function of searching swiftly to previously designated points of interest on the tape using the index signal.

  -Index Search
  Searchs the wanted index points and plays back for five seconds at each point.

  -Intro-Scan
  Skips the unwanted index points and plays back the selected point.

  -Marking Index Points
  Press the recording button during the stop mode and the index signals are registered automatically. Auto register can be operated during pause recording or timer programming recording. The index indicator will blink on the display.

- **VPS (Video Program System) (OPTION)**
  VPS is a new system to prevent incorrect recordings being mode dut to a TV programme being postponed or cancelled.

- **LTC (Linear Time Counter)**
  This function resets the counter when front loading starts after inserting a tape. Linear time counter indicates the elapsed time of the tape running as second.

- **OSD (On Screen Display)**
  The VCR modes will be indicated on the television screen in white characters.

- **Unattended (Timer) Recording**
  The programmable timer can be preselected up to one year in advance to record up to 8 preselected programmes. (Normal Programme or daily programme or weekly programme).
  The timer turns VCR on and off and changes channels automatically.

- **EPS (Easy Programming System)**
  This lets you record up to six hours without programming the timer. It also allows you to start (or continue) recording immediately.

- **F-Advance (Frame-Advance)**
  Push this button to give still frame, each successive press moves the picture on frame by frame.
  Then you can enjoy clear and distinct still picture.

- **Automatic Digital Tracking**
  This function automatically optimizes a clearer picture in playback mode.

- **Safety Lock System (Child Lock)**
  The play button on the VCR and remote control can be locked to prevent access by young children. This feature can be operated by the remote control only and EJECT mode only.

- **GO TO**
  When the LTS (Linear Time Search) function is recalled as a circuit function, the GO TO search function advances the tape in the FF/REW to the time position requested.

Note : On insertion of tape into machine linear time counter is set to zero irrespective of position of tape.

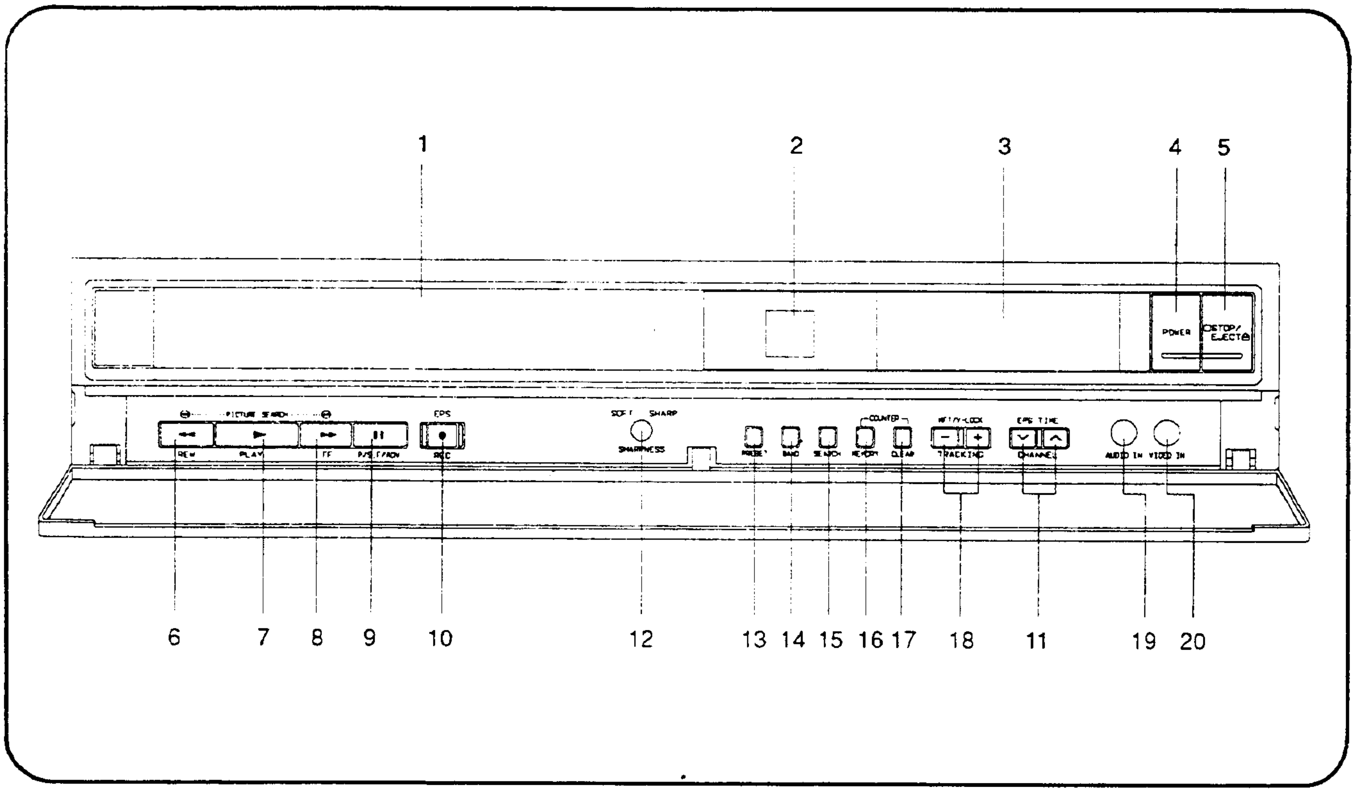
- **Search (JET)**
  If you push FF/REW in play for "reverse picture search" mode or" forward picture search" mode, picture search is performed 5/9 times as fast as play speed in SP/LP mode, and push FF/REW button again for JET picture search mode, it is performed 9/13 times as fast as play speed in SP/LP mode.

- **Skip Search**
  During playback of tapes, press Skip Search button on the remote. The tape will playback automatically during forward search when the counter reaches one minute.

- **Quick Start**
  This is to shorten the switching time from stop mode to play mode by having the tape deck fully loaded.

1-3. OPERATING CONTROLS AND FUNCTIONS

1-3-1. FRONT VIEW



1. **VIDEO CASSETTE COMPARTMENT**
   Push the cassette gently into the compartment until you feel automatic pull. Cassette can be inserted with the Power off as long as unit is connected to an AC outlet.

2. **INFRARED REMOTE SENSOR**
   Receives signal from infrared Remote Control.

3. **FUNCTION DISPLAY INDICATORS**
   (Refer to page 1-7 for indications)

4. **POWER Button**
   Push to turn VCR on and off.

Note:VCR turn on automatically when cassette is

5. **STOP/EJECT Button**
   Press to stop tape during play, record, rewind or fast forward. If the button is pressed during Fully-Automatic play, the function will be cancelled.
   When VCR is in STOP mode, press to remove the video cassette. Cassette can also be ejected when VCR power is off as long as unit is connected to an AC outlet.

6. **REW (Rewind/Reverse Picture Search) Button**
   When VCR is in STOP mode, press REW to rewind the tape. When the VCR is in the PLAY mode, press REW for high-speed reverse picture search. Press REW again for Jet Search. (Push PLAY button in Jet Search mode to playback.)

7. **PLAY Button**
   Push to playback a pre-recorded tape.

8. **F.F (Fast Forward/Forward Picture Search) Button**
   When the VCR is in STOP mode, press FF to forward the tape. When the VCR is in the PLAY mode, press FF for high-speed forward picture search.
   Press FF again for Jet Search.
   (Push PLAY button in Jet Search mode to playback).

9. **P/S F.ADV Button**
   Push to stop the tape temporarily during playback or recording. Still picture will be shown during playback. Push PLAY to continue play, and push REC button to continue recording. In pause still mode, press to advance one frame at a time.

10. REC/EPS Buttons
Push the REC button to start recording. Press REC again to Easy Programming System.

11. CHANNEL UP/DOWN (EPS TIME) Buttons
Push to select the channel you wish to record or view on TV. Continuous holding of button will change the channels. In EPS mode, use this control to adjust of time. Whenever these buttons are pressed, the time goes up or down by 10 min.

12. SHARPNESS
Turn to soften or sharpen picture to your preference. (playback only)

13. PRESET Button
Press this button for setting TV channel programmes.

14. BAND Button
Use to select BAND in tuning mode.
(VHF LOW, HIGH, UHF)

15. SEARCH Button
Press this button for automatic tuning channel.

16. MEMORY Button
Push this button-the tape will stop automatically during rewind when the counter reaches about "$0^{H}00^{M}00^{S}$".
Push this button in CH preset mode to store the broadcast station.

17. CLEAR Button
Use to reset the counter to "$0^{H}00^{M}00^{S}$"or to clear the clock setting data or to delete stored channel.

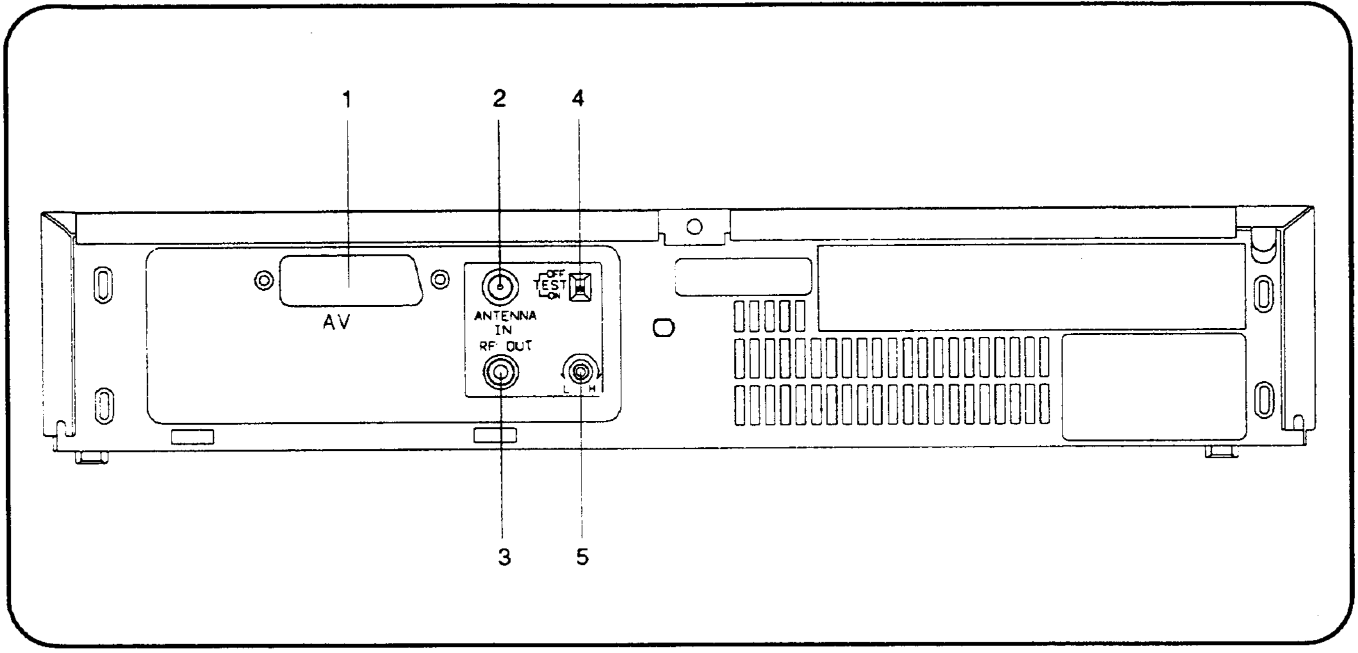
18. TRACKING/V-LOCK/MFT Button

- When you play a tape recorded on a different VCR horizontal streaks (noise bars) may appear in the picture. Press this button to remove noise bars.
- In still mode, adjust this control to minimize vertical shaking on the TV screen.
- In channel preset mode, adjust this control to tune for fine picture.

19. AUDIO IN jack
To record from an external audio source, connect this jack to the AUDIO output jack of an external audio source, such as a VCR, VCP, audio receiver or TV set.

20. VIDEO IN jack
To record from an external video source, such as a VCP, VCR or TV set, connect this jack to the VIDEO output jack of one of those sources.

1-3-2. REAR VIEW



1. AUDIO/VIDEO Socket
A 21-pin standardized audio/video input/output socket for the connection to a stereo TV equipped with the same type of socket.

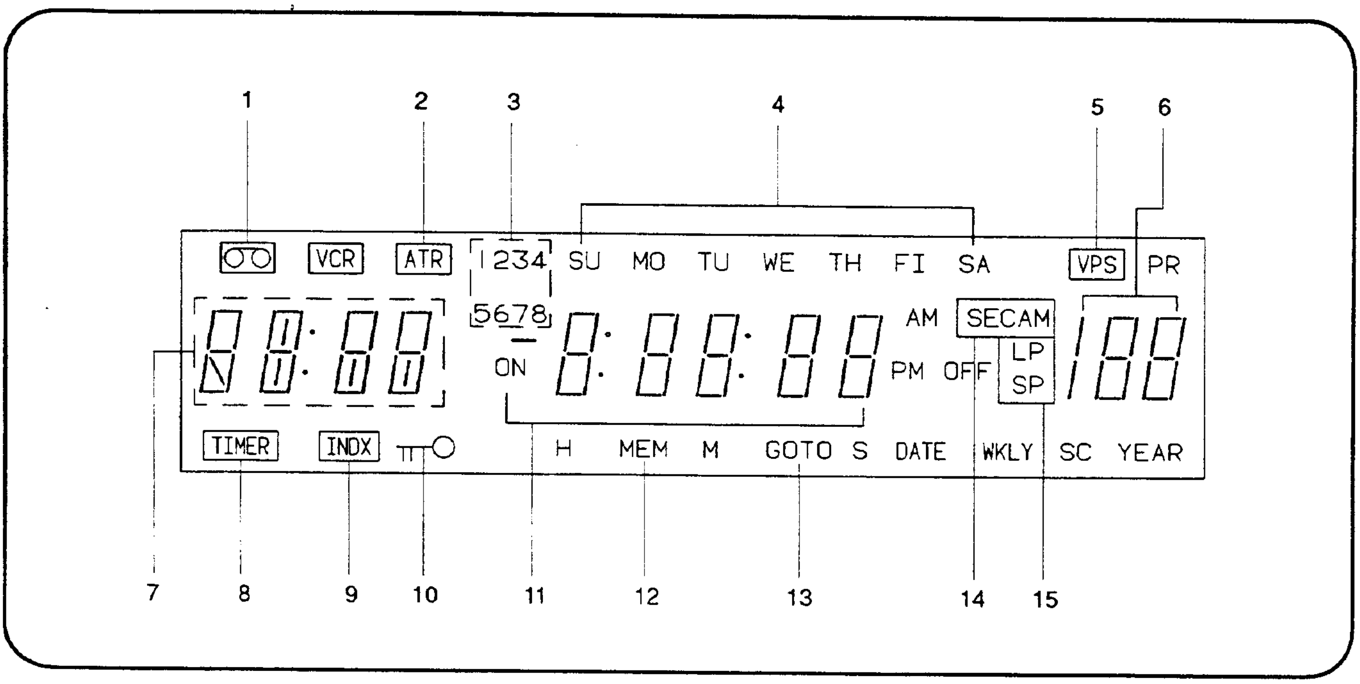
2. ANTENNA IN Connector
Connect an aerial to this connector.

3. RF OUT Connector
Connect to the aerial connector of a TV receiver through the RF cable (provided).

4. Test Signal Switch (TEST)
Set to ON when tuning your TV receiver for the video channel. A test signal in the form of two vertical white bars will be available.

5. RF CHANNEL PRE-SET
In some areas the pre-set RF output of your video cassette recorder may clash with a TV broadcast. If this occurs rotate this control using a small screw-driver in a clockwise or counterclockwise direction. A new video channel has been set now and you will need to retune your television video channel to the new RF output.

1-3-3. MULTIFUNCTION DISPLAY



1. **Cassette-In indicator (📼)**
   This indicator lights when a cassette is properly inserted in the VCR.

2. **ATR (Auto Tracking) indicator**
   Flashes when digital auto tracking is operating.

3. **Programme Number indicator**
   Illuminates for programme number for timer recording.

4. **DAY indicator**
   This indicator displays the day of the week set by the VCR clock for the present timer.

5. **VPS indicator (OPTION)**
   Illuminates when program recording is in VPS mode.

6. **Channel indicator**
   Indicates the selected channel number. Also indicates the index number during index search, and programme number during intro scan.

7. **Tape mode indicator**

8. **Timer indicator**
   When timer record mode is set, this indicator appears.

9. **INDEX (index) indicator**
   Appears during index search, intro scan and when index codes are added to the tape during recording.

10. **Safety Lock indicator**
    Lights when the VCR's play button has been locked.

11. **Clock/Tape counter display**
    Clock appears when VCR's power is off, tape counter appears when VCR's power is on. Also indicates the tuning position during station tuning.

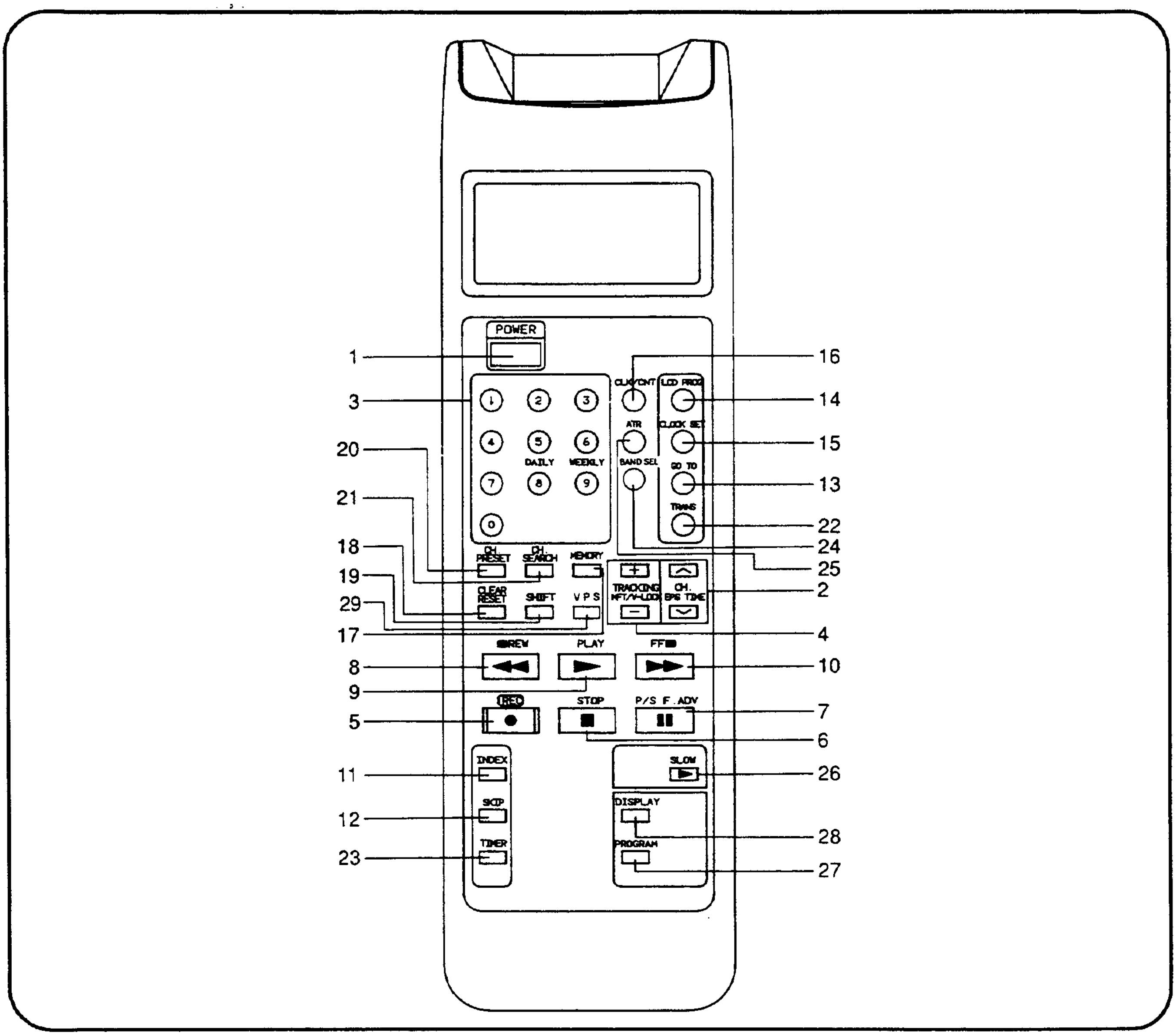
12. **MEMORY indicator**
    When MEMORY button is set to ON, this indicator appears.

13. **GO TO indicator**
    At GO TO mode, this indicator lights.

14. **SECAM indicator**
    This indicator lights when MESECAM broadcasting is received and MESECAM tape is played back.

15. **Tape speed indicators**
    Indicate the tape playback or recording speed.
    SP : Standard play (VR4632/VR4631)
    LP : Long play (half the standard play speed)

1-3-4. REMOTE CONTROL



POWER
CLK/CNT
LCD PROG
ATR
CLOCK SET
BAND SEL
GO TO
TRANS
1
2
3
4
5
6
7
8
9
0
DAILY
WEEKLY
CH. PRESET
CH. SEARCH
MEMORY
CLEAR RESET
SHIFT
V P S
TRACKING MFT/V-LOCK
CH. EPS TIME
REW
PLAY
FF
REC
STOP
P/S F.ADV
INDEX
SKIP
TIMER
SLOW
DISPLAY
PROGRAM
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3
20
21
18
19
29
17
8
9
5
11
12
23
16
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24
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10
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6
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28
27

(VR4633 - LCD REMOTE CONTROL)

1. POWER Button
Press to turn VCR on or off.

2. CH UP/DOWN (EPS TIME) Buttons
Push to select channel to view or record.
In EPS mode, set this control to adjust off time.
Whenever these buttons are pressed, the time goes up or down by 10 min.

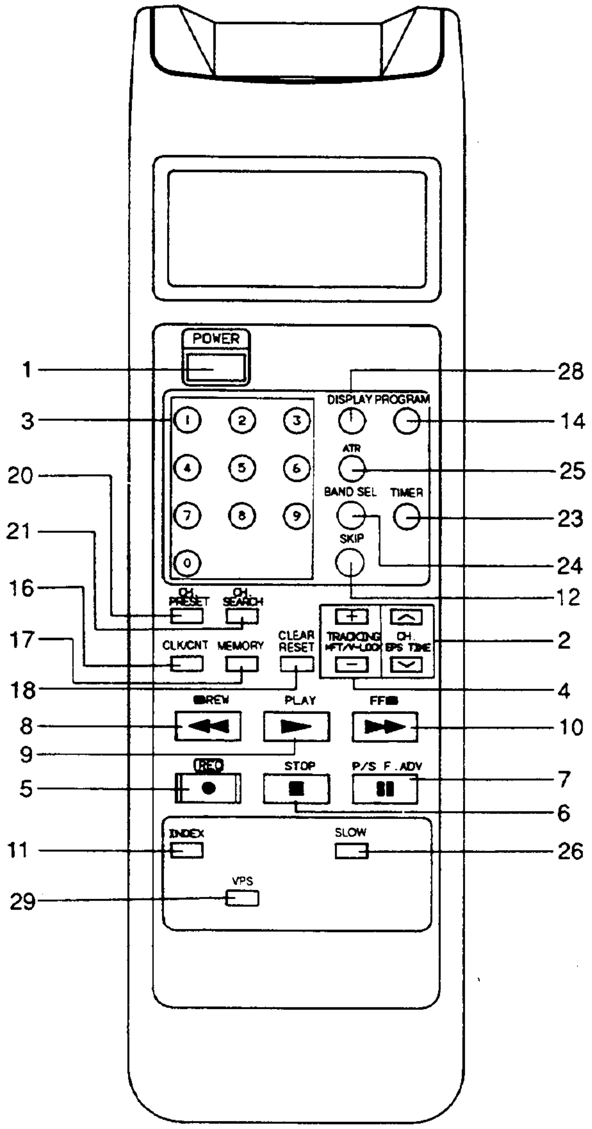
3. 10 KEY Buttons (0 through 9)
Press to enter channel to view or record.
Use for setting the clock and programming the timer.

4. TRACKING/V-LOCK/MFT Button
Press to remove the noise or streaks.

5. REC Button
Press to start recording.
Press again for Easy Programming System.

6. STOP Button
Press to stop the tape.

7. P/S F.ADV Button
Press to stop the tape temporarily during playback or recording.
In still mode, press to advance one frame at a time.


POWER
DISPLAY
PROGRAM
1
2
3
4
5
6
7
8
9
0
ATR
BAND SEL
TIMER
SKIP
CH. PRESET
CH. SEARCH
CLK/CNT
MEMORY
CLEAR RESET
TRACKING HFT/V-LOCK
CH. EPS TIME
REW
PLAY
FF
REC
STOP
P/S F.ADV
INDEX
SLOW
VPS
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26

(VR4632/VR4631 - W/O LCD REMOTE CONTROL)

8. REW (Rewind/Reverse Picture Search) Button
Press to rewind the tape. In the play mode, press for high speed reverse picture search.
Press PLAY to revert to playback.

9. PLAY Button
Press to playback prerecorded the tape.

10. F.F (Fast Forward/Forward Picture Search) Button
In the play mode, press for high speed forward picture search. Press and hold this button for jet search.
Press PLAY to revert to playback.

11. INDEX Button
Press to turn on the electronic programming index.

12. SKIP SEARCH Button

13. GO TO Button
Press this button for GO TO function.

14. LCD PROG Button
Press to enter remote control programming mode.

15. CLOCK SET Buttton
Press this button for clock setting.

16. COUNT/CLOCK Button
Press to switch between counter mode and clock mode.

17. MEMORY Button
Press to stop the tape automatically during rewind when the counter reaches about "$0^{H}00^{M}0^{S}$".
Press this button in CH preset mode to store the broadcast station.

18. CLEAR/RESET Button
Use to reset the counter to "$0^{H}00^{M}0^{S}$" or to clear the clock setting data and memorized channel.

19. SHIFT Button
Press to go to the next step while clock setting, LCD programming.

20. CH. PRESET Button
Press this button for setting TV channel programme.

21. CH. SEARCH Button
Press to commence the search for a broadcast station.

22. TRANS Button
Press to transfer LCD programme from remote control to VCR set.

23. TIMER Button
Press this button after programming for unattended recording.

24. BAND Button
Use to select BAND in Tuning mode.

25. AUTO TRACKING Button
Press to remove the noise bars.

26. SLOW Button
Press SLOW to begin slow motion.

27. PROGRAMME Button
Press to set clock or to program timer recording.

28. DISPLAY Button
Press once to show present status.

29. VPS Button (OPTION)
Press this button to select the VPS recording.

1-4. REPLACEMENT OF CHIP PARTS

1. Some resistors, shorting jumpers (0 Ω resistance), ceramic capacitors, transistors, and diodes are chip parts. These chip parts cannot be reused after they are once removed.

2. Additional compactness is achieved by using subminiature chip parts for certain circuit elements. When replacing these parts, note the cautions outlined below.

3. Required tools :
   1) Fine tipped, well insulated soldering "pencil", about 30 Watts.
   2) Tweezers
   3) Blower type hair dryer.

4. Soldering cautions :
   1) Do not apply heat for more than 3 seconds.
   2) Avoid using a rubbing stroke when soldering.
   3) Discard removed chips ; do not reuse them.
   4) Supplementary cementing is not required.
   5) Use care not to scratch or otherwise damage the chips.

5. Removal (resistors, capacitors, etc.) :
   1) Melt the solder at one side.

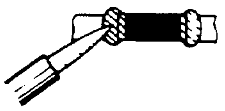


Fig. 1

2) Grasp the part with tweezers and melt the solder at the other side.

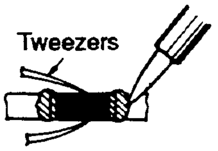


Fig. 2

3) Remove the part with a twisting motion.

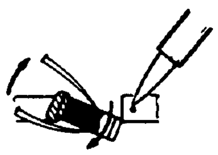


Fig. 3

6. Removal (transistors, diodes, etc.) :
   1) Melt the solder of one lead.

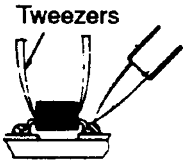


Fig. 4

2) Lift the side of that lead upward.

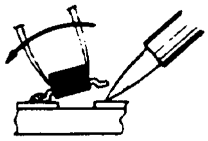


Fig. 5

3) Simultaneously heat solder of the two remaining leads and lift part to remove.

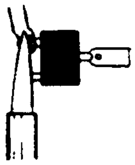


Fig. 6

7. Preheating (except for semiconductors) :
   Immediately before installing new resistors or capacitors, use a blower type hair dryer and preheat the part for about two minutes at approximately 150℃.

8. Replacement :
   1) Presolder the contact points of the circuit pattern.

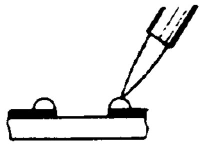


Fig. 7

2) Press the part downward with tweezers and apply the soldering pencil as indicated in the figure.

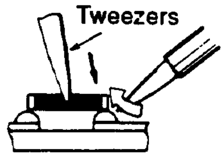


Fig. 8

1-5. HOW TO IDENTIFY LEADLESS (CHIP) COMPONENT

1-5-1. Check the following before M.E.L.F Troubleshooting

- * Cracked or chipped component body
- * Cracked or separated solder joints
- * Peeling end terminations or fractured leads
- * Rejection of solder from copper pads or component
- * Foreign matter on copper pads
- * Solder bridges

1-5-2. M.E.L.F (Metal-ELectrode Face Bonding) Identification

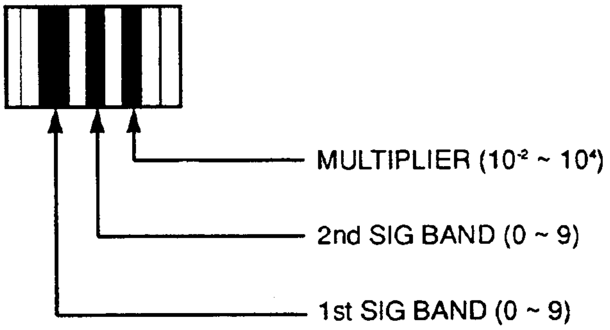
1) Body Color Features

* Capacitor
- Pink : Roted Voltage (12V, 16V, 25V)
- Yellowish Green : Roted Voltage (50V)

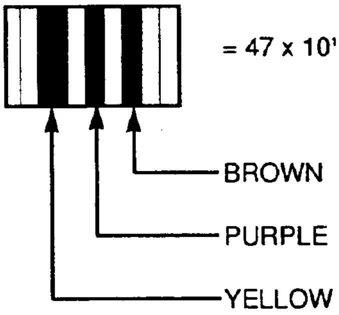
* Resistor : Yellow

2) Standard M.E.L.F Chip Capacitor and Resistor Code

The capacitance and resistance can be indicated by three color. The 1 st color band represents the first significant figure of the resistor's (capacitor's) value. Also, the 1 st color band is the thickest. The 2nd color band represents the second significant figure of capacitor's value. The 3rd color band represents the multiplier.

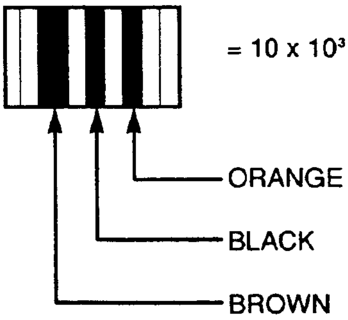


*** Capacitor**



$= 47 \times 10^{1} (10) = 470$ pF

*** Resistor**



$= 10 \times 10^{3} (1000) = 10{,}000\ \Omega$
$= 10\text{K}\ \Omega$

COLOR BAND	BROWN	RED	ORANGE	YELLOW	GREEN	BLUE	PURPLE	GRAY	WHITE	BLACK	GOLD	SILVER
1st AND 2nd NO	1	2	3	4	5	6	7	8	9	0	-	-
MULTIPLIER	10^{1}	10^{2}	10^{3}	10^{4}	-	-	-	-	-	10^{0}	10^{-1}	10^{-2}

TABLE - 1

1-6. CLEANING AND LUBRICATION

1-6-1. CLEANING TAPE MECHANISM

Periodic cleaning is necessary to insure continued excellent performance of the tape mechanism.To clean the following parts,patch and solvent are available.

1. Capstan shaft.
2. All idler wheels.
3. All tape guide posts.
4. Supply and take-up reels.
5. Pinch roller.
6. Capstan belt.
7. Capstan motor pulley.

1-6-2. CLEANING OF ROTATING AND STATIONARY HEADS

To clean video heads,full erase head,audio/control(A/C) head,use only head cleaning kit and solvent.

Note: When cleaning video heads move the cleaning stick in the direction of head rotation.Wiping in a vertical direction may damage the heads.

Press a chamois cloth which has been dipped in cleaning fluid lightly against the rotating cylinder assembly,then do the cleaning by slowly rotating upper cylinder ass'y by hand.

Note: Never try to clean by using the motor to turn it.

1-6-3. LUBRICATION TAPE MECHANISM

The tape transport mechanism is properly lubricated at the factory.In normal use cycles,and with average environmental conditions,additional lubrication should not be required during the first year of operation.

Depending on the frequency of use and environmental conditions,periodic lubrication may be required.
When relubricating,remove old lubricant first,then sparingly apply new lubricant.
(Excessive lubricant may be transferred to other assemblies causing malfunction.)

Use grease on the following parts every 1,000 hours of operations.(See exploded view for location.)

1. Between base pole assembly(L,R)and main base.
2. Gear master
3. Gear E/J drive
4. Gear L/D "L,R"
5. Base pole edge
6. Slide main brake
7. Pinch drive unit
8. Gear escalator
9. Lever shaft
10. Tension arm ass'y cam
11. Lever tension control
12. Gear review
13. I.B slide ass'y

Oil may be required for the following parts after 1,000 hours of operation.(See exploded view for location.)

Main base
1. Arm tension mould
2. Shaft reel disk "L, R" mould
3. Shaft gear worm

Other parts which are not listed above do not be required lubrication,except when parts are replaced.
Use appropriate oil or grease as indicated on exploded view.

1-7. ABBREVIATIONS

2X	: Double
4.43MHz	: Color Sub Carrier
ACC	: Automatic Color Circuit
ACK	: Automatic Color Killer
ADD	: Adder
AFC	: Automatic Frequency Control
AFT	: Automatic Fine Tuning
AGC	: Automatic Gain Control
ALC	: Automatic Level Control
AMP	: Amplifier
APC	: Automatic Phase Control
AUX	: Auxiliary
BATT	: Battery
BD	: Burst Deemphasis
BE	: Burst Emphasis
BH	: Power Supply for Selecting VHF High Band
BL	: Power Supply for Selecting VHF Low Band
BPF	: Band Pass Filter
C.FG	: Capstan Frequency Generator
C.SYNC	: Composite Sync
CAFC	: Capstan Auto Frequency Control
CAPC	: Capstan Auto Phase Control
CATV	: Cable TV
CAR	: Carrier
CAP	: Capstan
CCD	: Charge Coupled Device
CH	: Channel
CHAR.	: Character
CHROMA	: Chrominance
CM	: Capstan Motor
COMP	: Comparator
CST	: Cassette
C-ERR	: Capstan Error
CTL	: Control
C.PG	: Capstan Pulse Generator
CUR.EMPH	: Current Emphasis
D.FG	: Drum Frequency Generator
D.O.C	: Drop Out Compensator
D.PG	: Drum Pulse Generator
D/A	: Digital-to-Analog
D/C	: Dark/Clip
D.AFC	: Drum Auto Frequency Control
D.APC	: Drum Auto Phase Control
DE-EMPH	: De-Emphasis
DET	: Detector
DEV	: Deviation
DLYD	: Delayed
DM	: Drum Motor
DEMOD	: Demodulator
D.D	: Direct Drive
E-E	: Electronic-to Electronic
EMPH	: Emphasis
ENV	: Envelope
EQ	: Equalizer
EPS	: Easy Programming System
F.ADV	: Frame Advance
F-V	: Frequency to Voltage Converter
F.FWD	: Fast Forward
FH	: Frequency Horizontal
FG	: Frequency Generator
FM	: Frequency Modulator
FSC	: Frequency Sub Carrier
FWD	: Forward
FC	: Frequency Center
FL	: Frequency Low
GEN	: Generator
GND	: Ground
HPF	: High Pass Filter
IF	: Intermediate Frequency
IR	: Infrared Receiver
LED	: Light Emitting Diode
LIM	: Limiter
LPF	: Low Pass Filter
LUMA	: Luminance
LCD	: Liquid Crystal Display
LNR	: Linear
MIX	: Mixer
MM	: Monostable Multivibrator
MTS	: Multi Channel TV Sound
MEM	: Memory
MFT	: Manual Fine Tuning
N.C	: No Connection

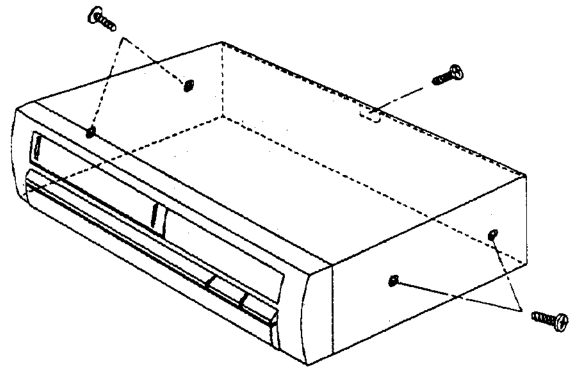
OSC	: Oscillator
OTR	: One Touch Recording
OSP	: On Screen Programme
OSD	: On Screen Display
PB	: Play Back
P.C	: Power Control
PG	: Pulse Generator
PIF	: Picture Intermediate Frequency
PLL	: Phase Lock Loop
PRG	: Programme
PWM	: Pulse Width Modulation
PWR	: Power
P/S	: Pause/Still
PD	: Power Detector
REG	: Regulator
REC	: Record
REC.SAF	: Record Safety
REW	: Rewind
RF	: Radio Frequency
REV	: Reverse
RECT	: Rectifier
REF	: Reference
SC	: Simul-Cast
SC	: Sub-Carrier
SCK	: Shift Clock
SDA	: Serial Data
SIF	: Sound Intermediate Frequency
SP	: Standard Play
SW25Hz	: Head Switching Pulse
SYNC	: Synchronizing Signal
SYSCON	: System Control
STB	: Strobe
SI	: Serial Input
SO	: Serial Output
SW	: Switch
TP	: Test Point
TRK	: Tracking
UL	: Unloading
VT	: Voltage Tuning
VLP	: Vertical Lock Pulse
V-REF	: Voltage Reference
V-SYNC	: Vertical Sync
VCO	: Voltage Controlled Oscillator
VCR	: Video Cassette Recorder
VIF	: Video Intermediate Frequency
VPS	: Video Programming System
VHS	: Video Home System
VXO	: Voltage Controlled Crystal Oscillator
VSS	: Voltage Super Source
VISS	: VHS Index Search System
W/C	: White /Clip
W/D	: White/Dark
Y/C	: Luminance/Chrominance
uP	: Microprocessor

2. DISASSEMBLY

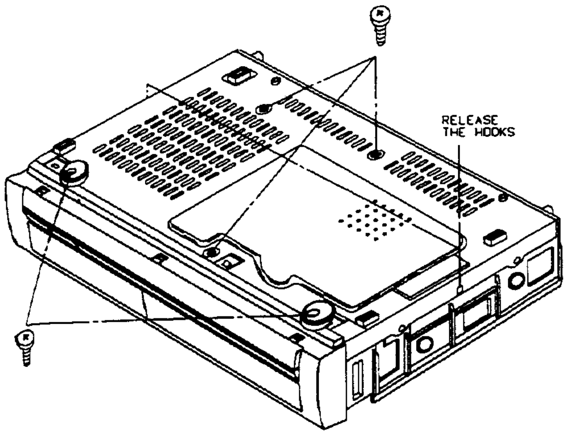
2-1. INSTRUMENT DISASSEMBLY

In case of trouble, etc. necessitating dismantling, please dismantle in the order shown in the illustrations. Reassemble in reverse order.

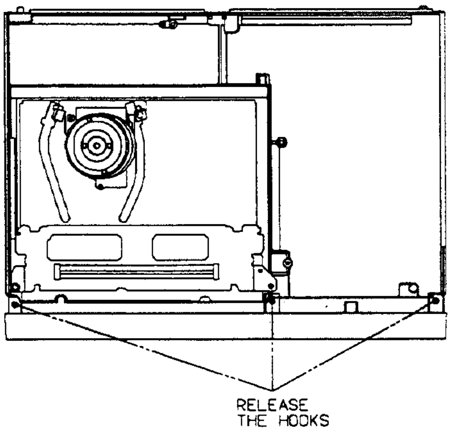
2-1-1. Top Cabinet Removal



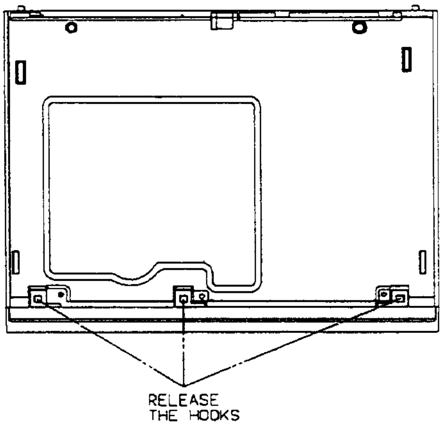
2-1-2. Bottom Cover Removal


RELEASE
THE HOOKS

2-1-3. Front Panel Removal


RELEASE
THE HOOKS

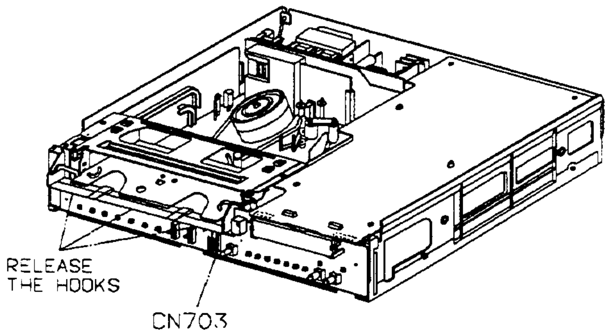
(Top View)


RELEASE
THE HOOKS

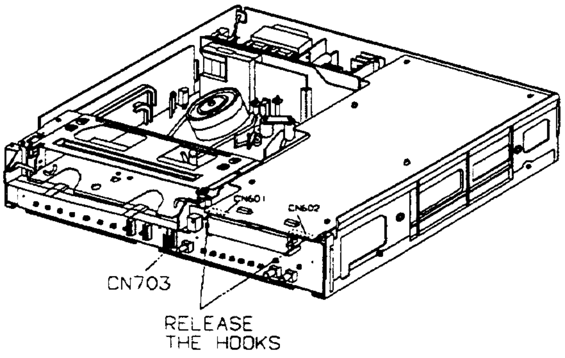
(Bottom View)

2-2. CIRCUIT BOARD DISASSEMBLY

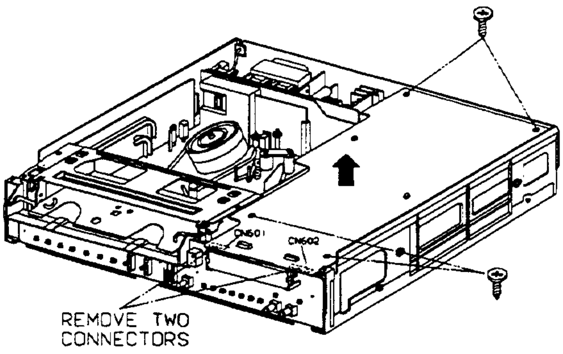
2-2-1. Function Circuit Board Removal


RELEASE THE HOOKS
CN703

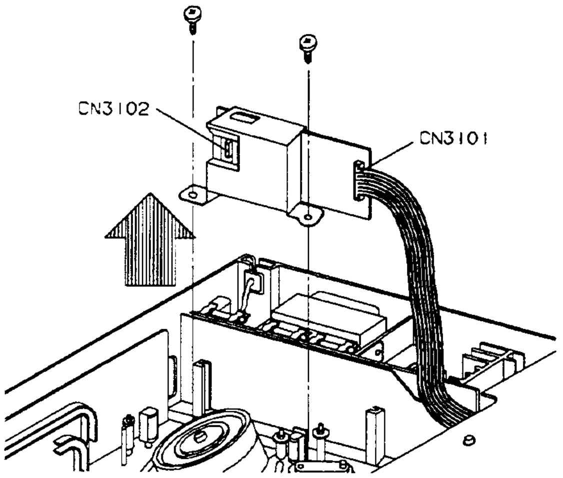
2-2-2. Timer Circuit Board Removal


CN601
CN602
CN703
RELEASE THE HOOKS

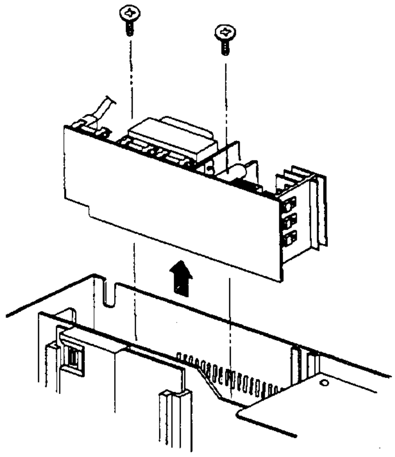
2-2-3. Main Circuit Board Removal


CN601
CN602
REMOVE TWO CONNECTORS

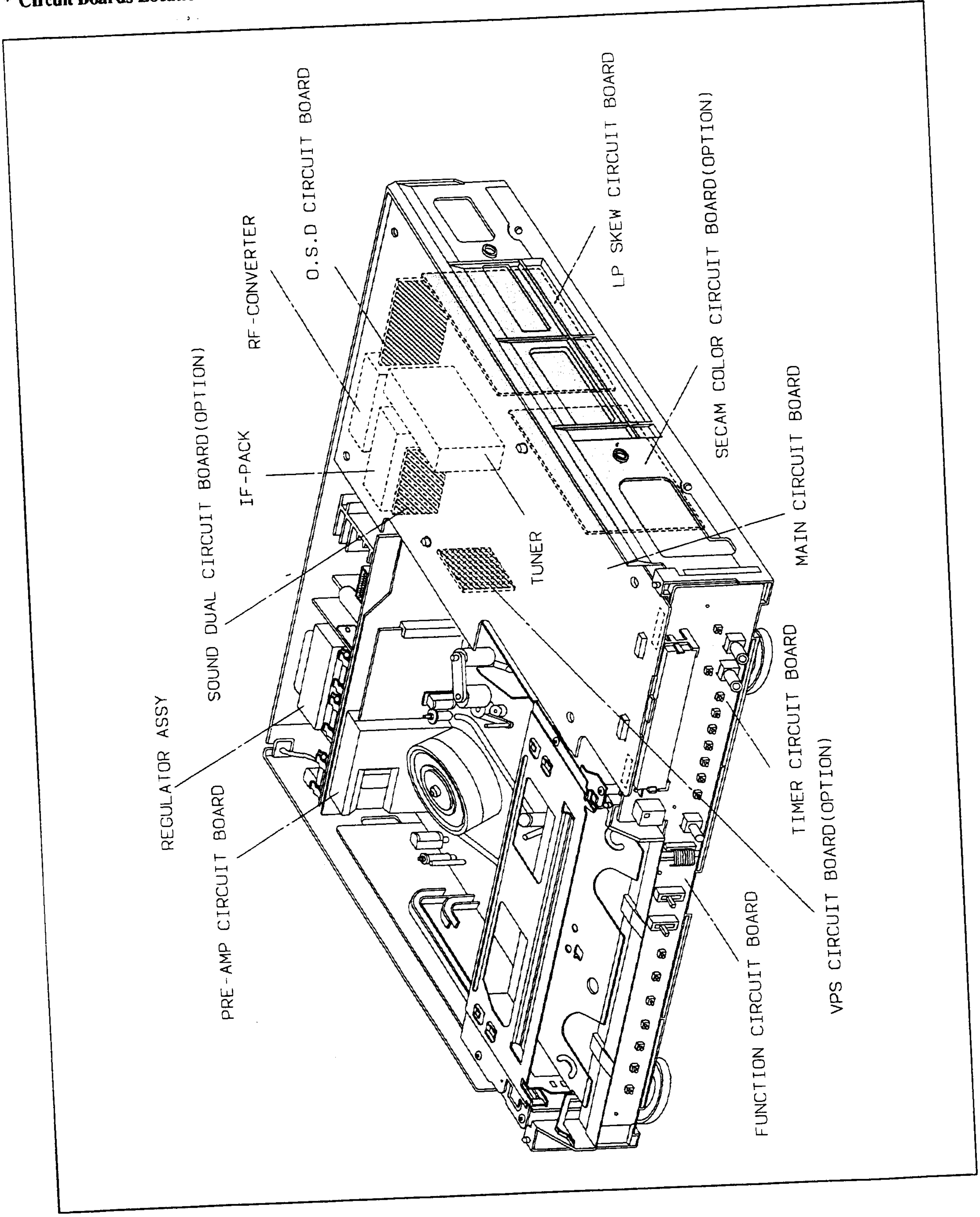
2-2-4. Pre-Amp Circuit Board Removal


CN3102
CN3101

2-2-5. Regulator Ass'y Removal



* **Circuit Boards Location**


REGULATOR ASSY
PRE-AMP CIRCUIT BOARD
SOUND DUAL CIRCUIT BOARD(OPTION)
IF-PACK
RF-CONVERTER
O.S.D CIRCUIT BOARD
TUNER
LP SKEW CIRCUIT BOARD
SECAM COLOR CIRCUIT BOARD(OPTION)
MAIN CIRCUIT BOARD
FUNCTION CIRCUIT BOARD
TIMER CIRCUIT BOARD
VPS CIRCUIT BOARD(OPTION)

2-3. TAPE TRANSPORT MECHANISM IDENTIFICATION

2-3-1. Top View

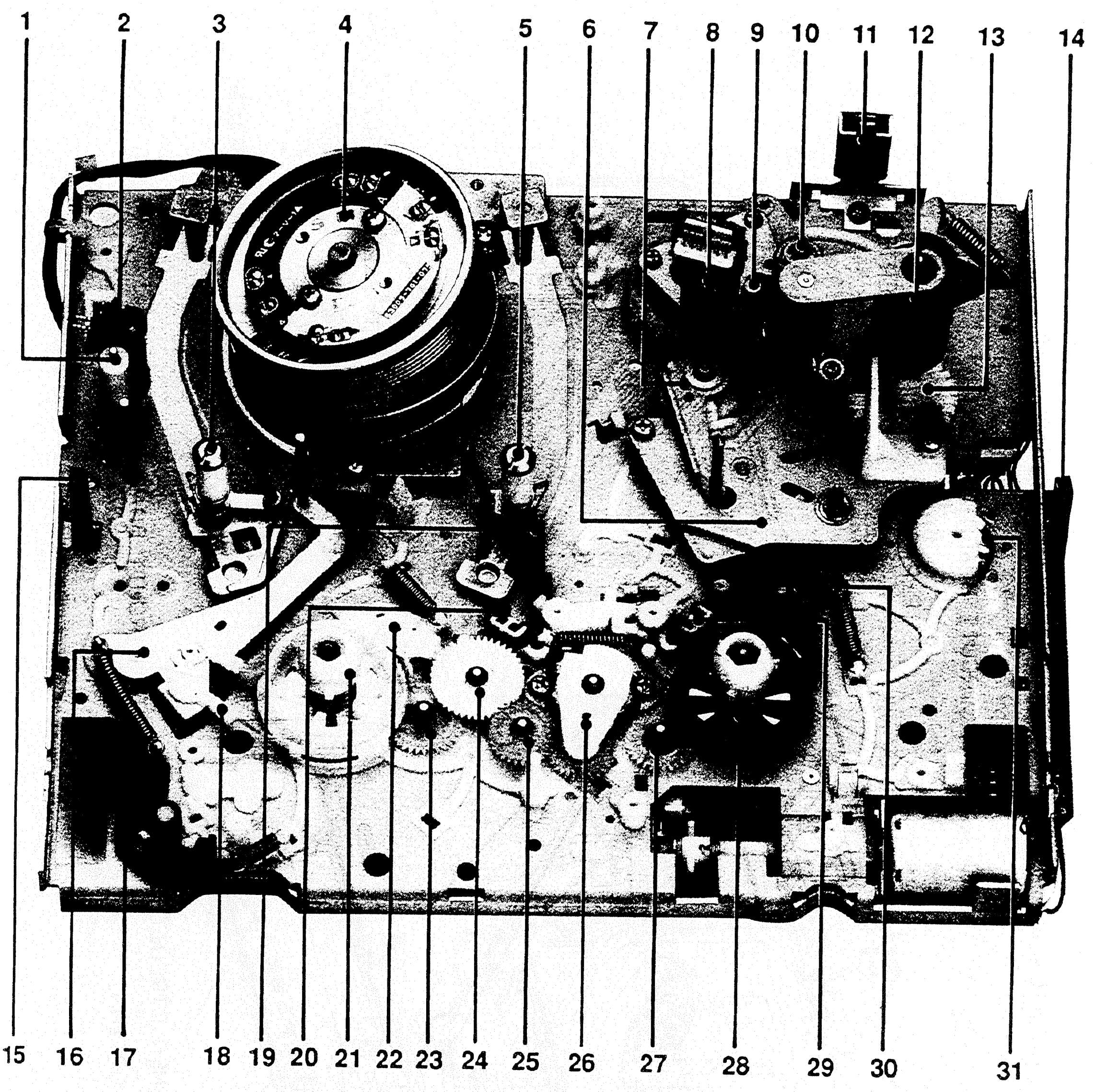

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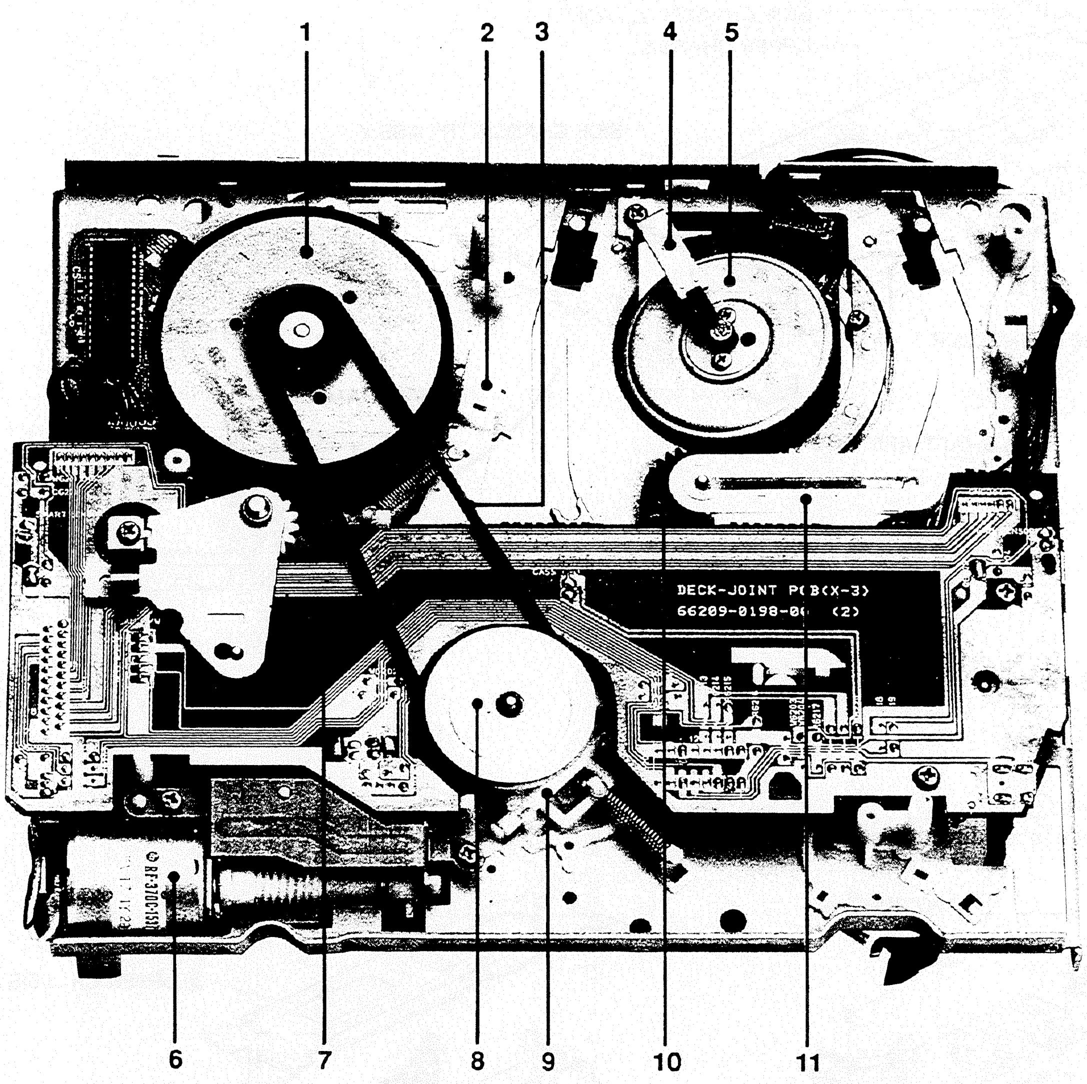
Fig. 1 Tape Transport Mechanism - Top View

1. SUPPLY ROLLER
2. F/E HEAD
3. S-GUIDE ROLLER
4. CYLINDER ASS'Y
5. T-GUIDE ROLLER
6. DRIVE PINCH ASS'Y
7. REVIEW ARM ASS'Y
8. ASS'Y A/C HEAD FULL
9. TAPE GUIDE
10. CAPSTAN SHAFT
11. HOLDER TR
12. PINCH ROLLER UNIT
13. GEAR ESCALATOR
14. START SENSOR
15. END SENSOR
16. ARM TENSION ASS'Y
17. LEVER REC S/W
18. BAND TENSION ASS'Y
19. LED-IR
20. BRAKE MAIN "L"
21. REEL DISK "L"
22. BRAKE SUB "L"
23. GEAR RELAY S3
24. GEAR RELAY S2
25. GEAR RELAY S1
26. IDLER SUB ASS'Y
27. GEAR RELAY "T"
28. REEL DISK "R"
29. BRAKE MAIN "R"
30. BRAKE SUB "R"
31. GEAR EJECT DRIVE

2-3-2. Bottom View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DECK-JOINT P(B(X-3)
66209-0198-0((2)
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10
11

Fig. 2 Tape Transport Mechanism - Bottom View

1. MOTOR D/D CAPSTAN
2. BRAKE D/D CAPSTAN
3. BELT CAPSTAN
4. HEAD BRUSH
5. CYLINDER MOTOR
6. L/D UNIT ASS'Y
7. DECK JOINT PCB
8. CLUTCH ASS'Y
9. LEVER SHIFT
10. GEAR LOADING "R"
11. SLIDE MAIN

2-4. HOUSING ASS'Y REMOVAL & REASSEMBLY

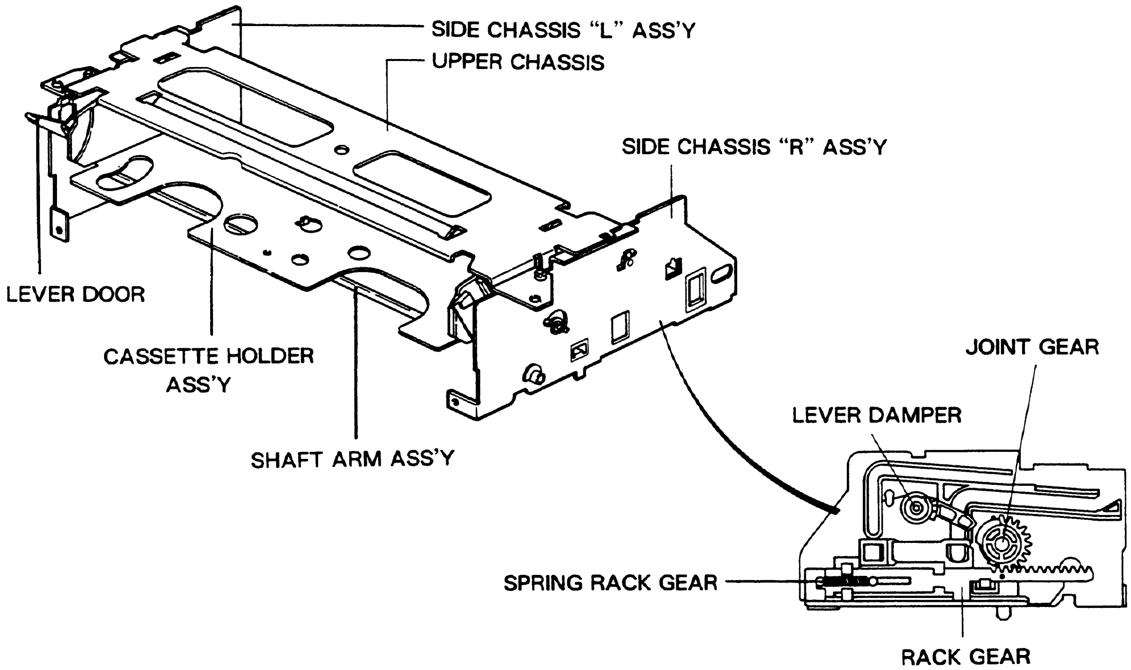

SIDE CHASSIS "L" ASS'Y
UPPER CHASSIS
SIDE CHASSIS "R" ASS'Y
LEVER DOOR
CASSETTE HOLDER ASS'Y
SHAFT ARM ASS'Y
JOINT GEAR
LEVER DAMPER
SPRING RACK GEAR
RACK GEAR

Fig. 3 Housing Ass'y Identification

2-4-1. Housing Ass'y Removal

1. Remove four (4) screws ①, ②.
2. Lift up the housing ass'y in the direction of arrow.

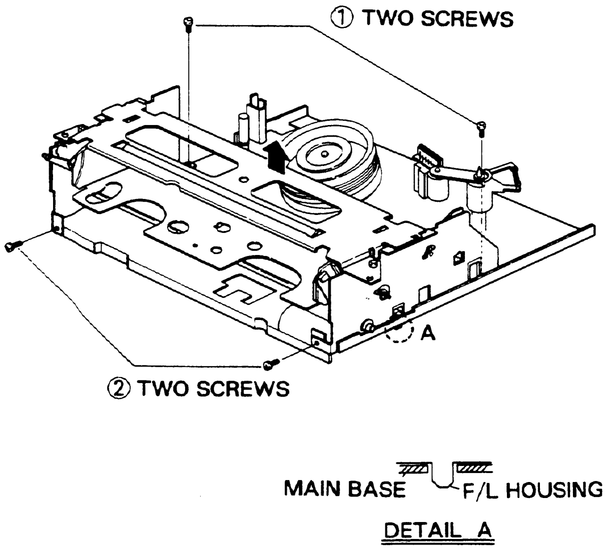

① TWO SCREWS
② TWO SCREWS
A
MAIN BASE
F/L HOUSING
DETAIL A

Fig. 4 Housing Ass'y Removal

2-4-2. Upper Chassis & Cassette Holder Ass'y Removal

1. Remove two (2) screws ①.
2. Lift up the upper chassis ② and the cassette holder ass'y ③ in the direction of arrow.

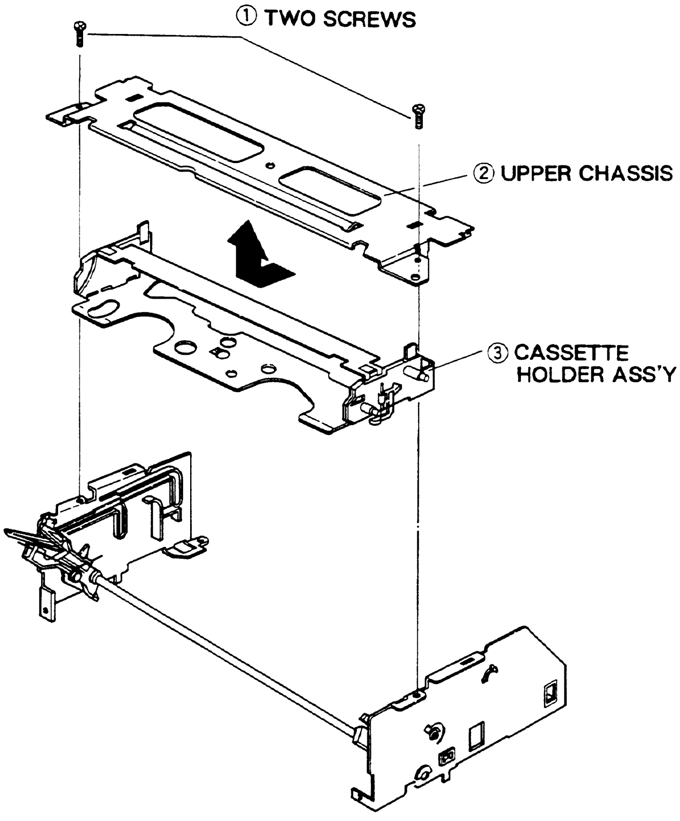

① TWO SCREWS
② UPPER CHASSIS
③ CASSETTE HOLDER ASS'Y

Fig. 5 Upper Chassis & Cassette Holder Ass'y Removal

2-4-3. Side Chassis "L", "R" Ass'y Removal

1. Remove the side chassis "L" ass'y ② from shaft arm ass'y ① in the direction of arrow (A).
2. Remove the side chassis "R" ass'y ③ from shaft arm ass'y ① in the direction of arrow (B).

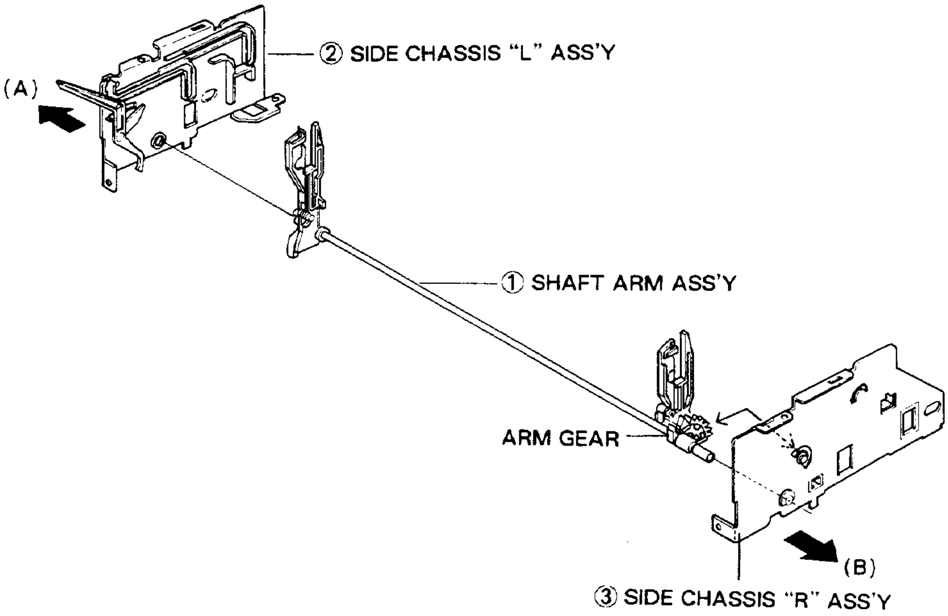

② SIDE CHASSIS "L" ASS'Y
(A)
① SHAFT ARM ASS'Y
ARM GEAR
(B)
③ SIDE CHASSIS "R" ASS'Y

Fig. 6 Side Chassis "L", "R" Ass'y Removal

2-4-4. Rack Gear & Joint Gear Removal

1. Push the rack gear ① in the direction of arrow (A) to the end.
2. Remove one screw ② and then the joint gear ③.
3. Remove the rack gear ① toward arrow (B).

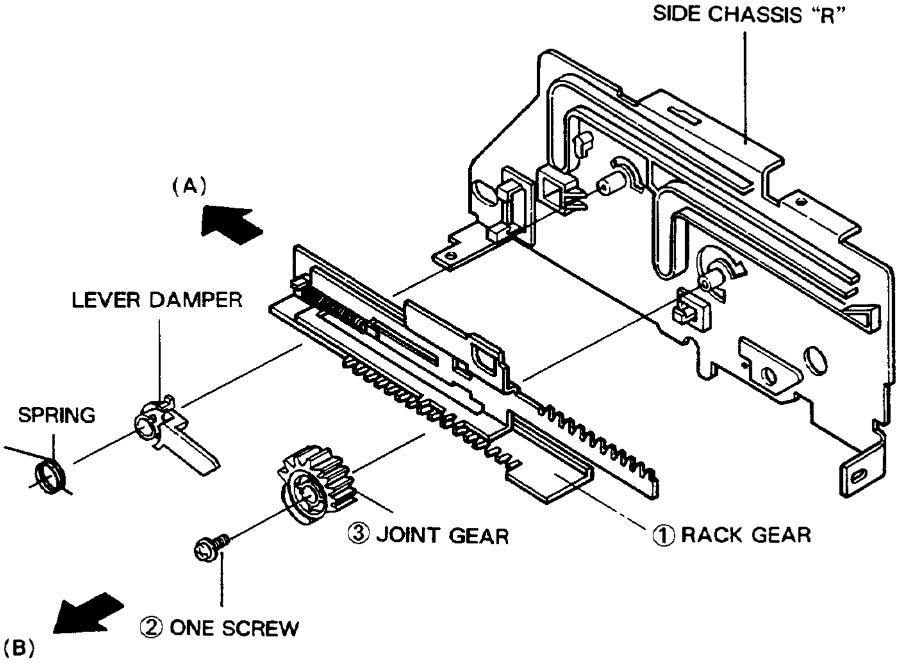

SIDE CHASSIS "R"
(A)
LEVER DAMPER
SPRING
③ JOINT GEAR
① RACK GEAR
② ONE SCREW
(B)

Fig. 7 Rack Gear & Joint Gear Removal

2-4-5. Reinstallation of Rack Gear and Joint Gear

Reinstallation and Timing of Rack Gear and Joint Gear

1. Pull the rack gear ① in the direction of arrow to the end.

2. Install the joint gear so that the slot #1 of joint gear ② is aligned with the tooth #1 of rack gear ①. (Refer to Fig. 8)

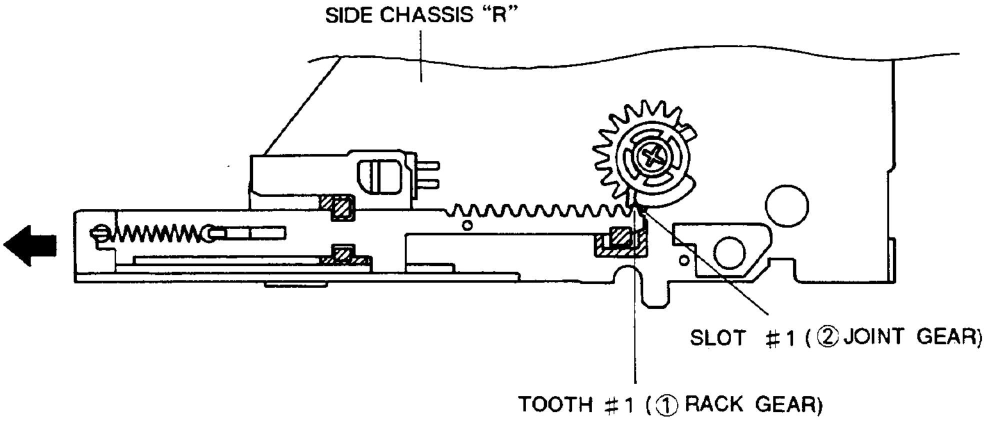

SIDE CHASSIS "R"
SLOT #1 (② JOINT GEAR)
TOOTH #1 (① RACK GEAR)

Fig. 8 Reinstallation and Timing of Rack Gear and Joint Gear

Timing Confirmation of Rack Gear and Joint Gear (Eject mode)

3. Push the rack gear ① in the direction of arrow to the end.

4. Make sure that the tooth #12 (Timing Point (B)) of joint gear ② and the Timing Point (A) of rack gear ① are aligned correctly as shown in Fig. 9.

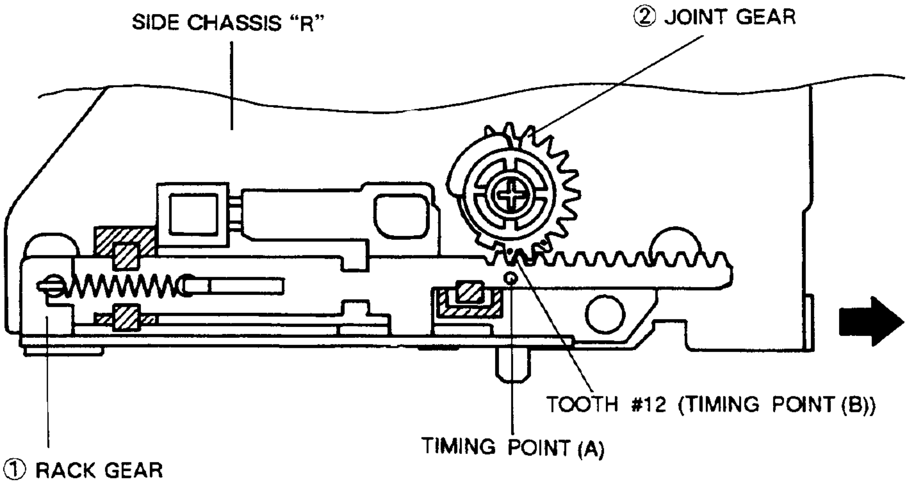
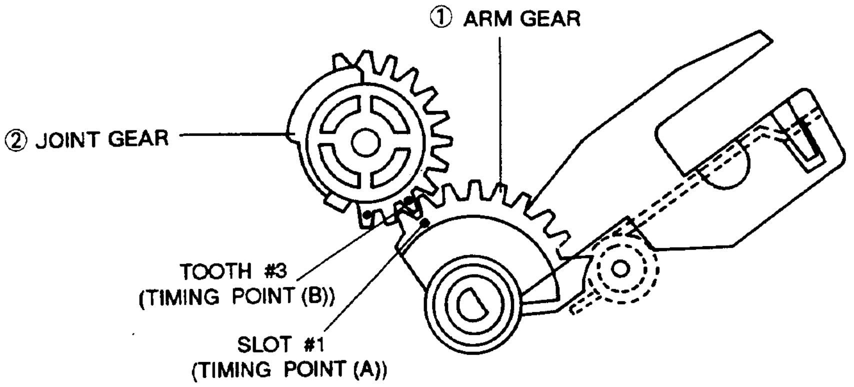

SIDE CHASSIS "R"
② JOINT GEAR
TOOTH #12 (TIMING POINT (B))
TIMING POINT (A)
① RACK GEAR

Fig. 9 Timing Confirmation of Rack Gear and Joint Gear

2-4-6. Reassembly of Joint Gear & Arm Gear

1. Install the arm gear ① so that the slot #1 (Timing Point (A)) of arm gear ① and the tooth #3 (Timing point (B)) of joint gear ② are aligned correctly as shown in Fig. 10.



① ARM GEAR
② JOINT GEAR
TOOTH #3
(TIMING POINT (B))
SLOT #1
(TIMING POINT (A))

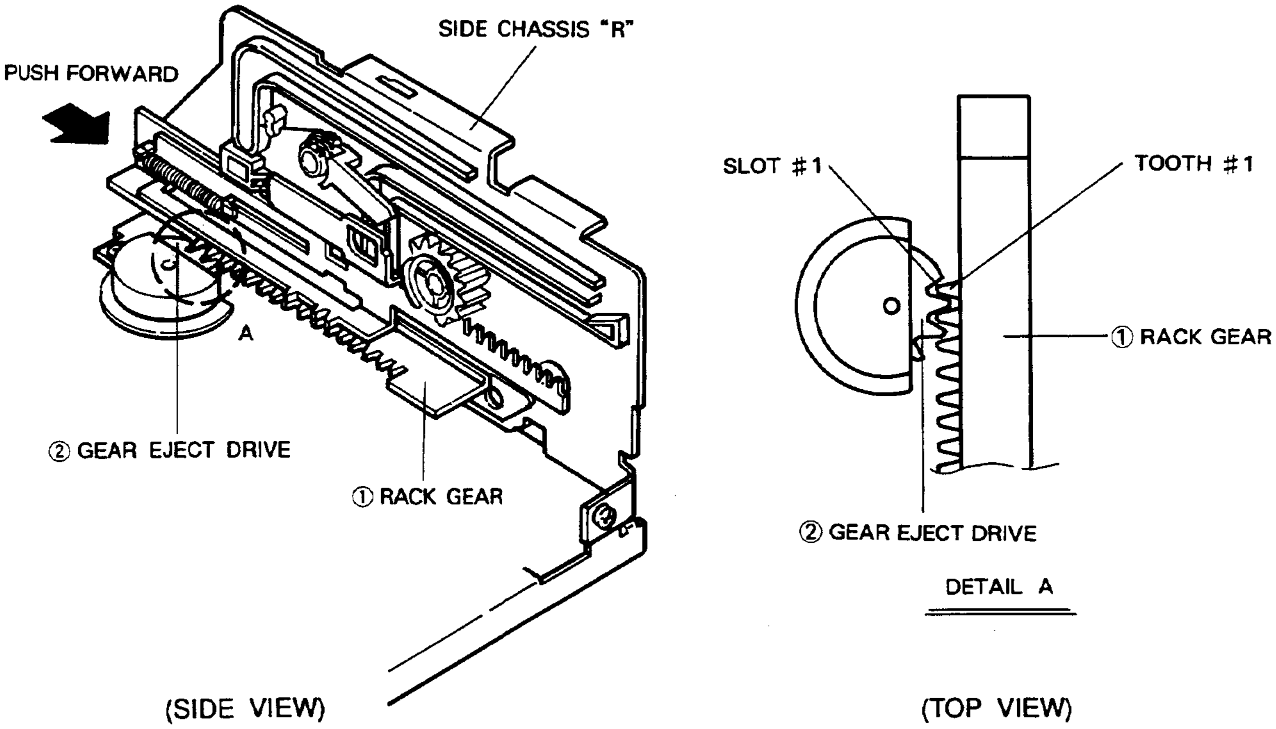
Fig. 10 Reassembly Joint Gear & Arm Gear

2-4-7. Reinstallation of Housing Ass'y

NOTE : Make sure deck is in the eject position.

1. Assembly the housing ass'y while pushing the rack gear forward to align the slot #1 of gear eject drive ② and the tooth #1 of rack gear ①. (Refer to Detail A)

2. Install housing ass'y and then tighten four (4) screws. (See Fig. 4)



SIDE CHASSIS "R"
PUSH FORWARD
A
② GEAR EJECT DRIVE
① RACK GEAR
(SIDE VIEW)
SLOT #1
TOOTH #1
① RACK GEAR
② GEAR EJECT DRIVE
DETAIL A
(TOP VIEW)

Fig. 11 Reinstallation of Housing Ass'y

2-4-8. How to operate unit without the Housing Ass'y

1. Momentarily short Emitter and Base of Q6202 in the Deck Joint PCB to simulate tape loading.
2. All function will work in this mode.

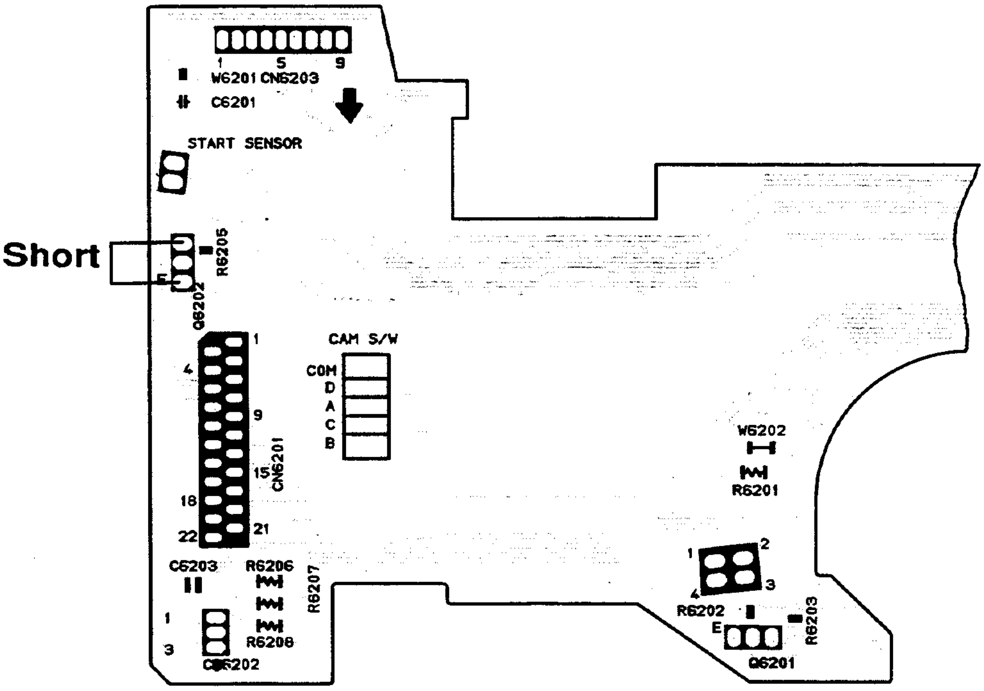

1 5 9
W6201 CN6203
C6201
START SENSOR
Short
E
R6205
Q6202
1
4
9
15
18
22
21
CN6201
CAM S/W
COM
D
A
C
B
W6202
R6201
1
2
3
4
R6202
E
R6203
Q6201
C6203
R6206
R6207
R6208
1
3
C6202

Fig. 13 The Location of Q6202 (Deck Joint PCB)

2-5. CYLINDER ASS'Y REMOVAL & REASSEMBLY

2-5-1. Cylinder Ass'y Removal from Main Base

1. Release the F.P.C cable ① from pre-amp ass'y (CN3101) and disconnect the lead connector ass'y ② from the bottom cylinder PCB.
2. Remove three (3) screws ③ securing the base cylinder and the main base.
3. Lift the cylinder ass'y ④ in the direction of arrow.

CAUTION : Take extreme care when removing the cylinder ass'y. Do not touch the video head tips located on the upper cylinder during servicing.

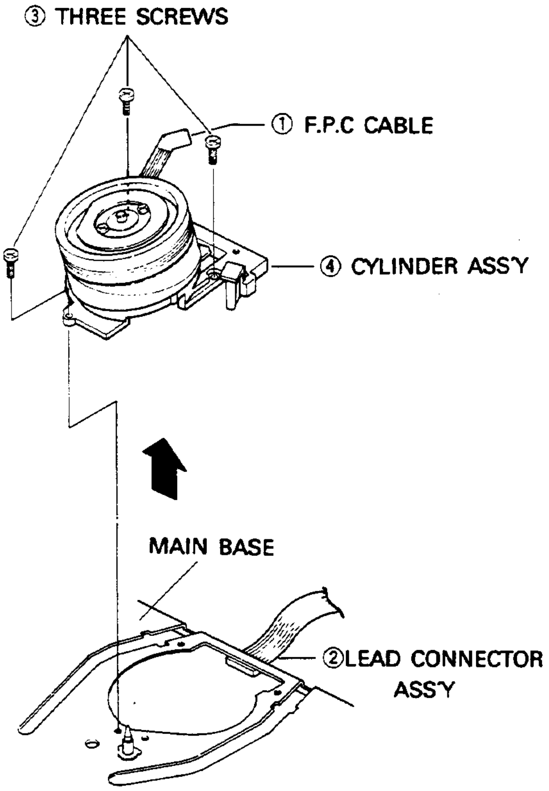

③ THREE SCREWS
① F.P.C CABLE
④ CYLINDER ASS'Y
MAIN BASE
②LEAD CONNECTOR ASS'Y

Fig. 14 Cylinder Ass'y Removal

2-5-2. Exploded View of Cylinder Ass'y

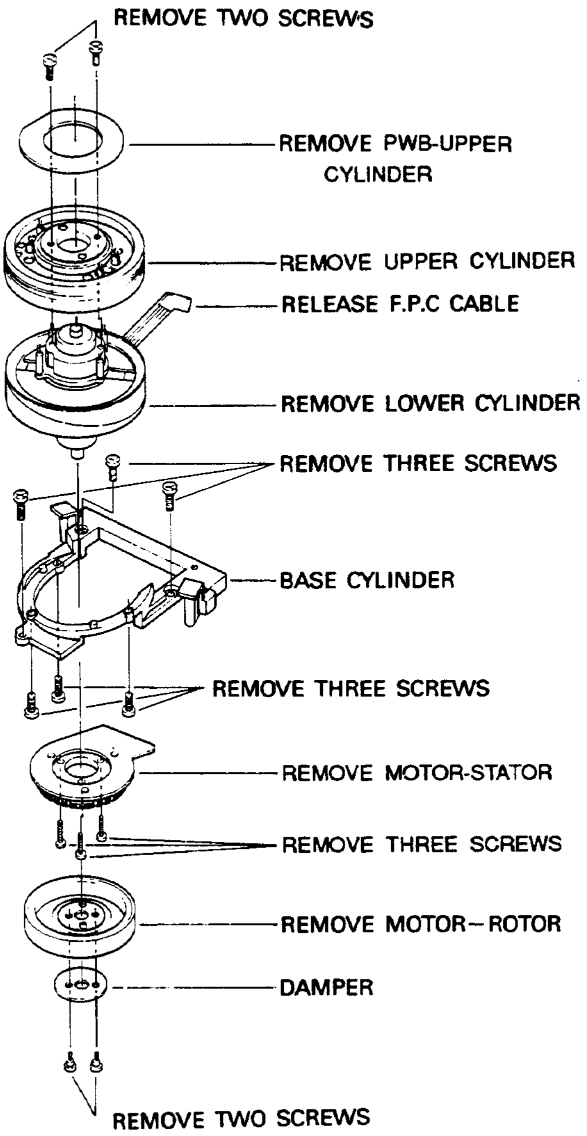

REMOVE TWO SCREWS
REMOVE PWB-UPPER CYLINDER
REMOVE UPPER CYLINDER
RELEASE F.P.C CABLE
REMOVE LOWER CYLINDER
REMOVE THREE SCREWS
BASE CYLINDER
REMOVE THREE SCREWS
REMOVE MOTOR-STATOR
REMOVE THREE SCREWS
REMOVE MOTOR-ROTOR
DAMPER
REMOVE TWO SCREWS

Fig. 15 Exploded View of Cylinder Ass'y

2-5-3. Upper Cylinder Ass'y Removal

1. Remove two (2) screws ① from the upper cylinder ass'y ③ and remove the upper cylinder ass'y ③ from the cylinder ass'y.
2. Unsolder the PWB-Upper cylinder ② from the upper cylinder ass'y ③. (See Fig. 17)

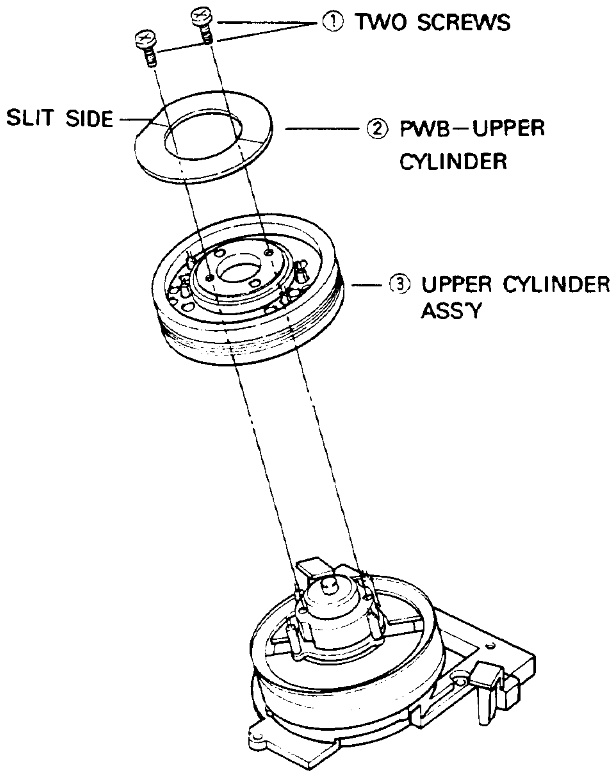

① TWO SCREWS
SLIT SIDE
② PWB-UPPER CYLINDER
③ UPPER CYLINDER ASS'Y

Fig. 16 Upper Cylinder Ass'y Removal

2-5-4. Lower Cylinder Ass'y Removal

1. Remove three (3) screws ① from the base cylinder ②.
2. Lift up the lower cylinder ass'y ③ from the base cylinder ②.

NOTE : Align two (2) base cylinder pin before reinstalling.

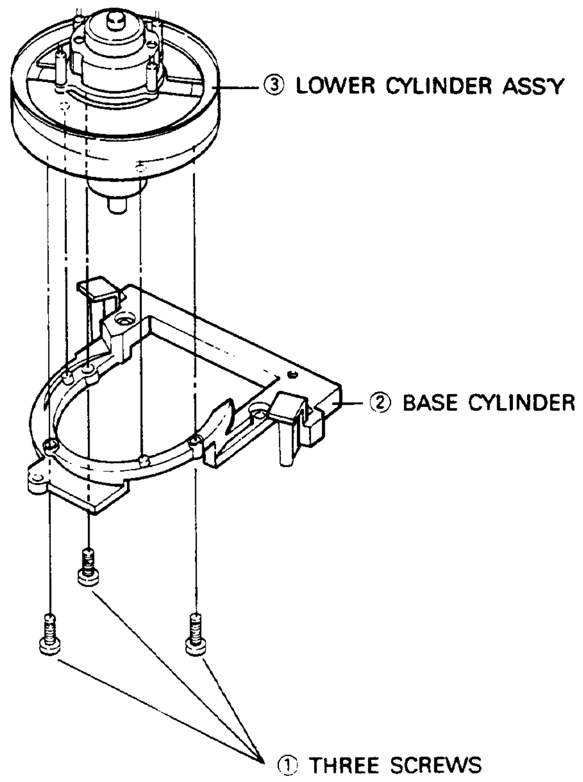
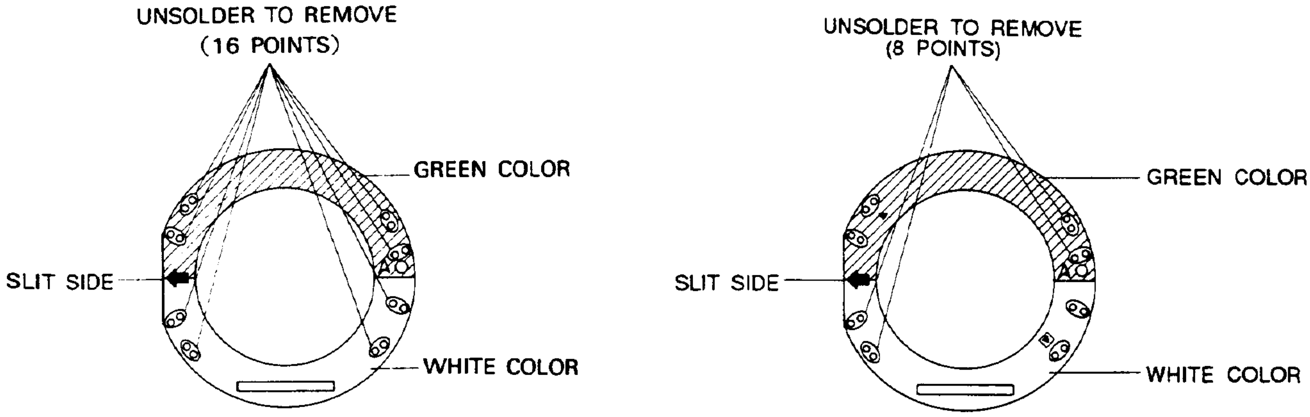

③ LOWER CYLINDER ASS'Y
② BASE CYLINDER
① THREE SCREWS

Fig. 18 Lower Cylinder Ass'y Removal


UNSOLDER TO REMOVE (16 POINTS)
GREEN COLOR
SLIT SIDE
WHITE COLOR
UNSOLDER TO REMOVE (8 POINTS)
GREEN COLOR
SLIT SIDE
WHITE COLOR

4HD ; VR4633

2HD ; VR4632/VR4631

Fig. 17 PWB Upper Cylinder Top View

2-5-5. Cylinder Motor Removal

1. Remove two (2) screws ① from the damper ②, then remove the damper ② and the motor-rotor ③.
2. Remove three (3) screws ④ from the motor-stator ⑤ and take it out.

NOTE : Mark rotor position to insure correct phase orientation upon reinstallation.

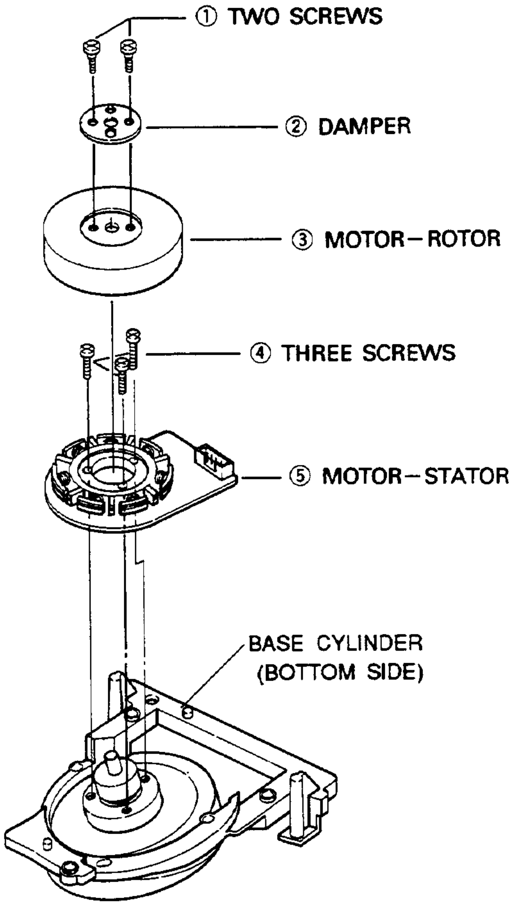

① TWO SCREWS
② DAMPER
③ MOTOR-ROTOR
④ THREE SCREWS
⑤ MOTOR-STATOR
BASE CYLINDER
(BOTTOM SIDE)

Fig. 19 Cylinder Motor Removal

2-5-6. Assembly of Lower Cylinder

1. Secure with three (3) screws to the motor-stator. (Rfer to Fig. 19)
2. Reinstall the motor-rotor, damper and secure with two (2) screws. (Refer to Fig. 19)

NOTE : make sure that the hole of bush cylinder on lower cyilnder and the hole of motor rotor are aligned correctly as shown in Fig. 20.

3. Reinstall the lower cylinder to the base cylinder and secure with three (3) screws.

NOTE : Align two (2) base cylinder pin before reinstall.

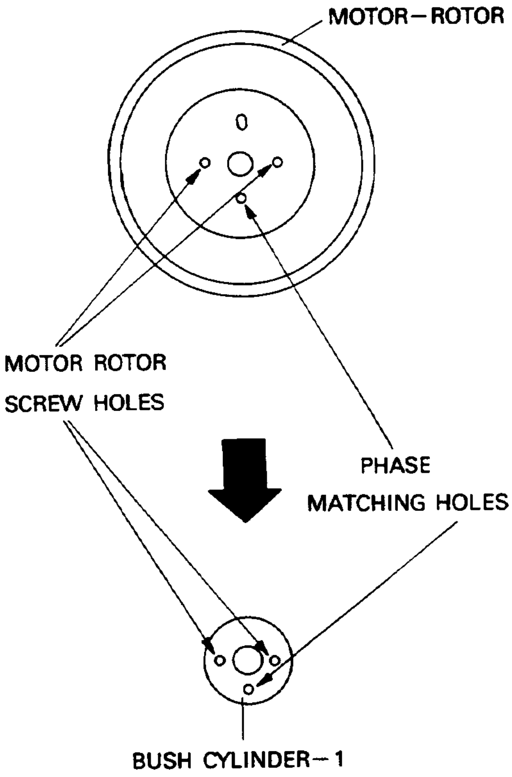

MOTOR-ROTOR
MOTOR ROTOR
SCREW HOLES
PHASE
MATCHING HOLES
BUSH CYLINDER-1

Fig. 20 Bush Cylinder -1 & Motor Rotor Timing

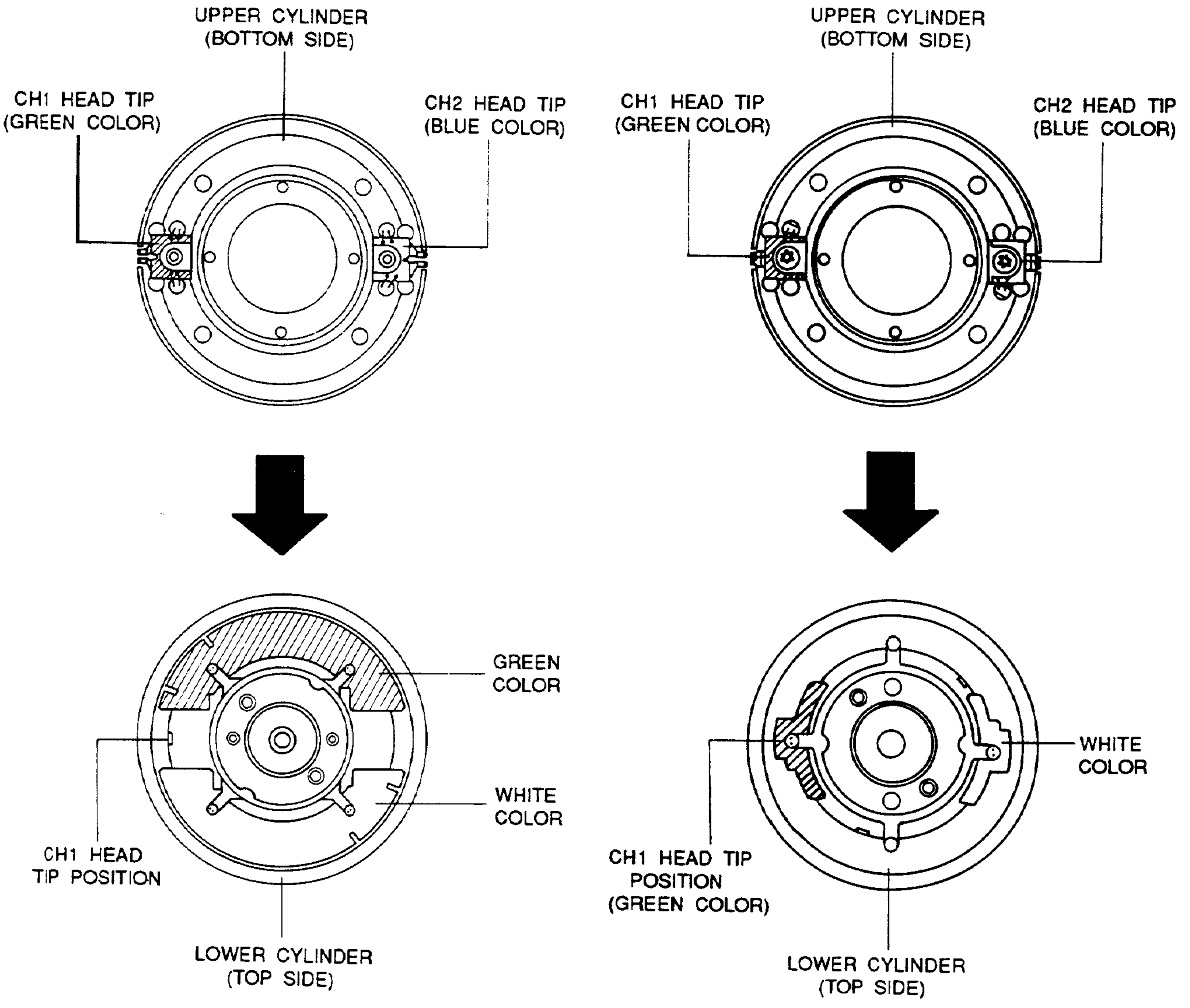
2-5-7. Assembly of Upper Cylinder

1. When installing the upper cylinder, make sure green color (CH1) goes to CH1 head tip postion on lower cylinder.
2. Tighten two (2) screws on the upper cylinder. (Refer to Fig. 16)

NOTE : Timing of the upper cylinder PCB.

2-5-8. Assembly of Cylinder Ass'y

1. Reinstall cylinder ass'y on the main base.
2. Tighten three (3) screws securing the base cylinder and the main base.
3. Reconnect F.P.C cable to the pre-amp ass'y and the lead connector ass'y to the bottom cylinder PCB.


UPPER CYLINDER (BOTTOM SIDE)
CH1 HEAD TIP (GREEN COLOR)
CH2 HEAD TIP (BLUE COLOR)
GREEN COLOR
WHITE COLOR
CH1 HEAD TIP POSITION
LOWER CYLINDER (TOP SIDE)
UPPER CYLINDER (BOTTOM SIDE)
CH1 HEAD TIP (GREEN COLOR)
CH2 HEAD TIP (BLUE COLOR)
WHITE COLOR
CH1 HEAD TIP POSITION (GREEN COLOR)
LOWER CYLINDER (TOP SIDE)

4HD ; VR4633

2HD ; VR4632/VR4631

Fig. 21 Upper Cylinder Ass'y Timing

2-6. REEL DISK ASS'Y REMOVAL

2-6-1. Brake Sub "L" Removal

1. Remove the spring brake sub "L" ①.
2. Lift up the brake sub "L" ② pushing the clip brake sub "L" ③ in the direction of arrow.

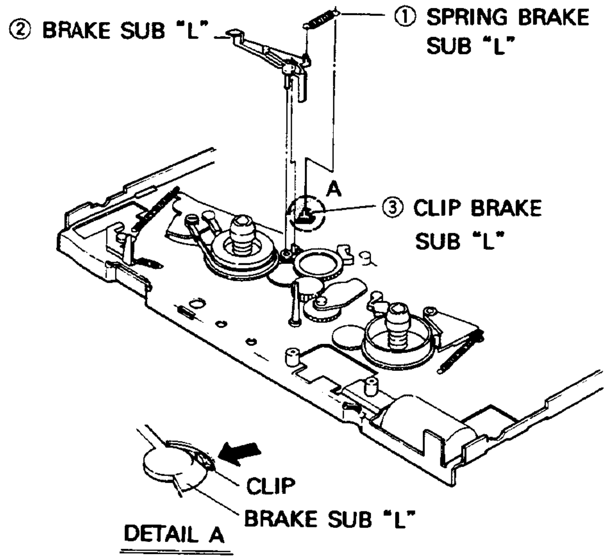

② BRAKE SUB "L"
① SPRING BRAKE SUB "L"
A
③ CLIP BRAKE SUB "L"
CLIP
BRAKE SUB "L"
DETAIL A

Fig. 22 Brake Sub "L" Removal

2-6-2. Gear Relay S2 & S3 Removal

1. Remove the washer slits ①.
2. Lift up the gear relay S2 ② and S3 ③.

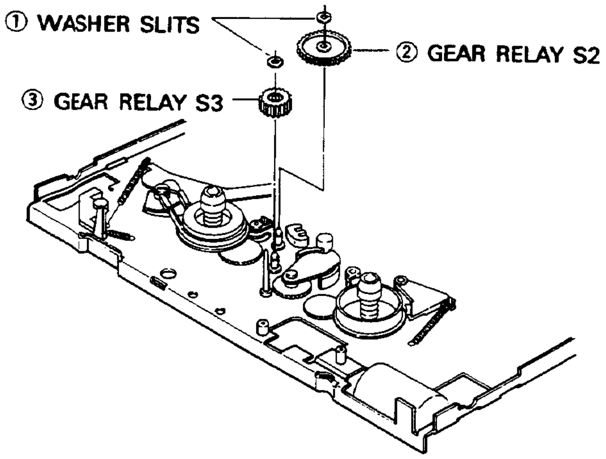

① WASHER SLITS
② GEAR RELAY S2
③ GEAR RELAY S3

Fig. 23 Gear Relay S2 & S3 Removal

2-6-3. Full Arm Tension Ass'y Removal

1. Take off the spring tension ①.
2. Push the pin arm tension ② releasing the clip in the direction of arrow (Bottom View).
3. Lift up the full arm tension ass'y ③.

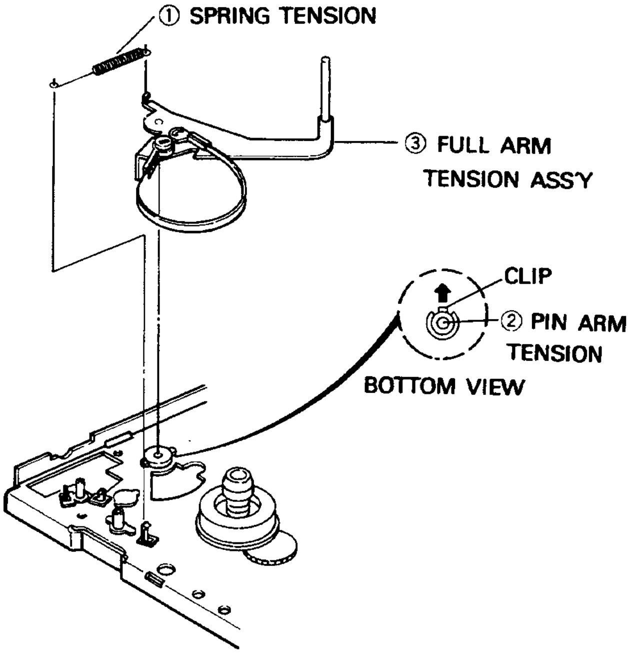

① SPRING TENSION
③ FULL ARM TENSION ASS'Y
CLIP
② PIN ARM TENSION
BOTTOM VIEW

Fig. 24 Full Arm Tension Ass'y Removal

2-6-4. Reel Disk "L" Ass'y & Gear Relay S1 Removal

1. Remove the washer slit (A) ①.
2. Lift up the reel disk "L" ass'y ② and washer plain ③.
3. Remove the washer slit (B) ④.
4. Lift up the gear relay S1 ⑤.

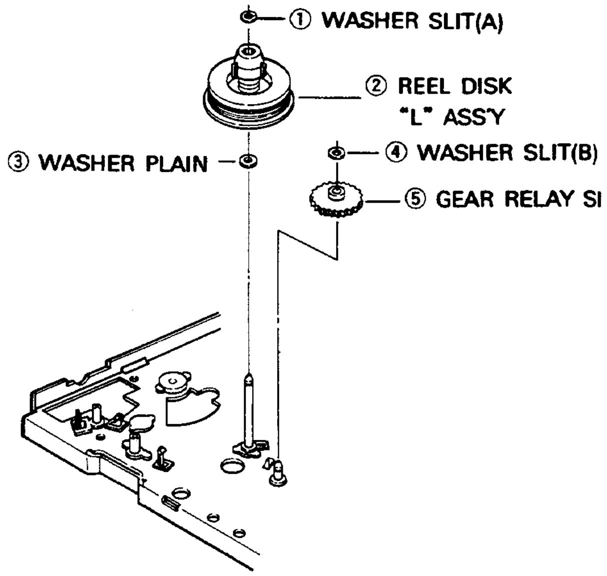

① WASHER SLIT(A)
② REEL DISK "L" ASS'Y
③ WASHER PLAIN
④ WASHER SLIT(B)
⑤ GEAR RELAY SI

Fig. 25 Reel Disk "L" Ass'y & Gear Relay S1 Removal

2-6-5. Brake Sub "R" Ass'y Removal

1. Remove the spring brake sub "R" ①.
2. Lift up the brake sub "R" ass'y ② pushing the clip brake sub "R" ③ in the direction of arrow.

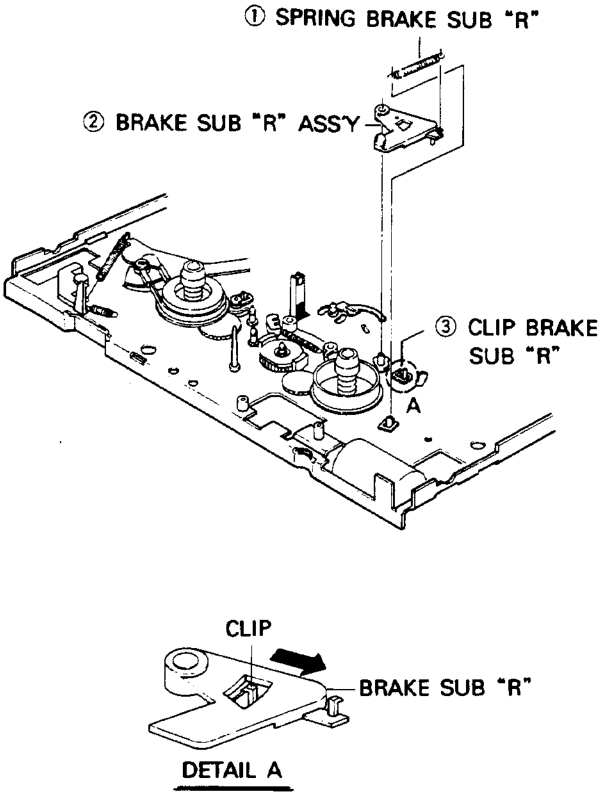

① SPRING BRAKE SUB "R"
② BRAKE SUB "R" ASS'Y
③ CLIP BRAKE SUB "R"
A
CLIP
BRAKE SUB "R"
DETAIL A

Fig. 26 Brake Sub "R" Ass'y Removal

2-6-6. Brake Main "L" & "R" Ass'y Removal (Fig. 27)

1. Remove the spring brake main ①.
2. Lift up the brake main "L" ass'y ② pushing the clip in the direction of arrow (A).
3. Lift up the brake main "R" ass'y ③ pushing the clip in the direction of arrow (B).

2-6-7. Reel Disk "R" Ass'y & Gear Relay "T" Removal (Fig. 28)

1. Remove the washer slit (A) ①.
2. Lift up the reel disk "R" ass'y ②.
3. Lift up the washer plain ③.
4. Remove the washer slit (B) ④.
5. Lift up the Gear Relay "T" ⑤.

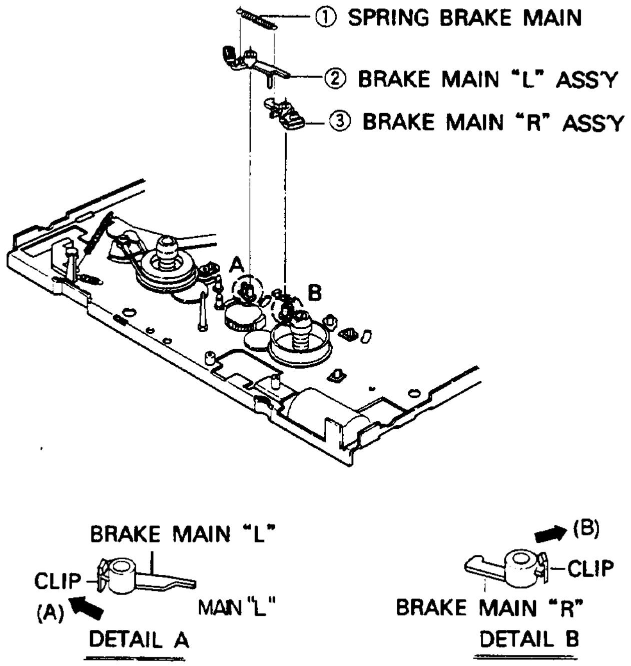

① SPRING BRAKE MAIN
② BRAKE MAIN "L" ASS'Y
③ BRAKE MAIN "R" ASS'Y
A
B
BRAKE MAIN "L"
CLIP
(A)
MAIN "L"
DETAIL A
(B)
CLIP
BRAKE MAIN "R"
DETAIL B

Fig. 27 Brake Main "L" & "R" Ass'y Removal

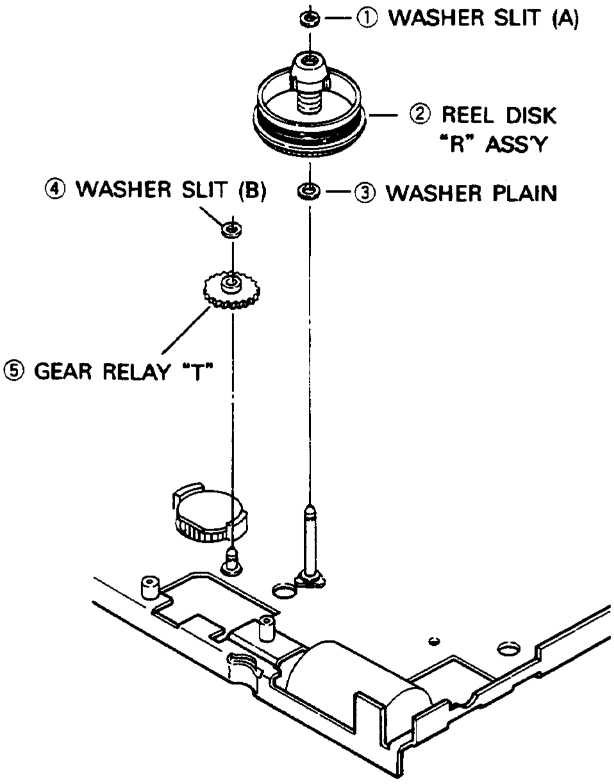

① WASHER SLIT (A)
② REEL DISK "R" ASS'Y
④ WASHER SLIT (B)
③ WASHER PLAIN
⑤ GEAR RELAY "T"

Fig. 28 Reel Disk "R" Ass'y & Gear Relay "T" Removal

2-6-8. Idler Sub Ass'y Removal

1. Remove the washer slit ①.
2. Lift up the idler sub ass'y ②.

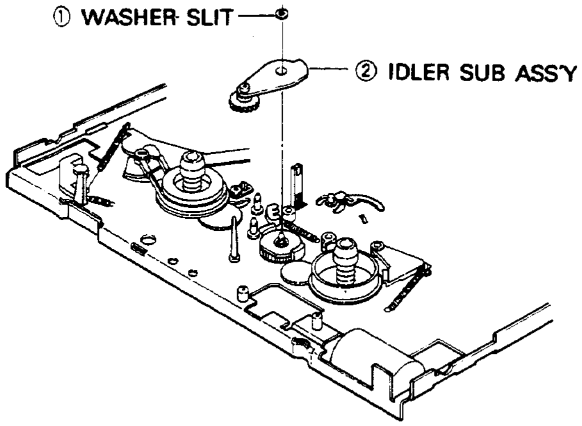

① WASHER SLIT
② IDLER SUB ASS'Y

Fig. 29 Idler Sub Ass'y Removal

2-6-9. Lever REC S/W Removal

1. Remove the spring D/D capstan ①.
2. Lift up the lever REC S/W ② pushing the clip in the direction of arrow.

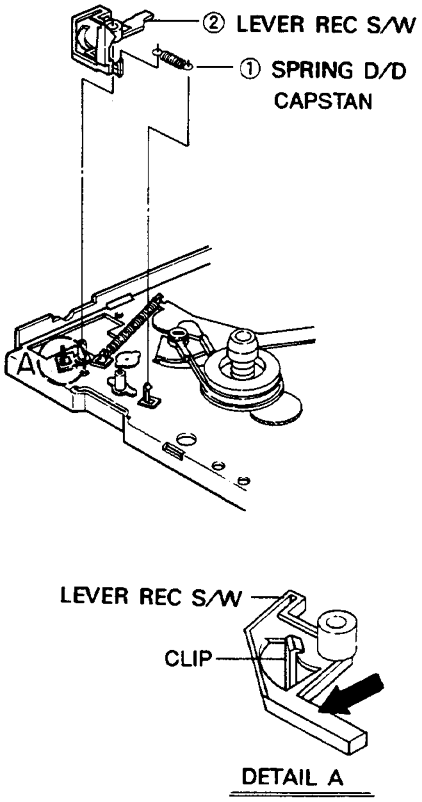

② LEVER REC S/W
① SPRING D/D CAPSTAN
A
LEVER REC S/W
CLIP
DETAIL A

Fig. 30 Lever REC S/W Removal

2-7. LOADING & CAPSTAN MOTOR ASS'Y REMOVAL & REASSEMBLY

2-7-1. Belt Capstan Removal

1. Remove the belt capstan ①.

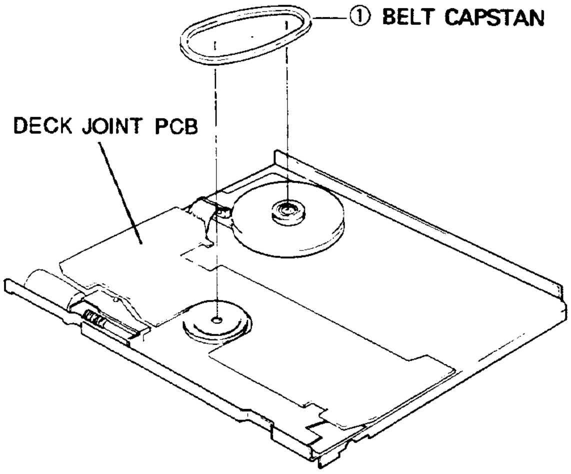

① BELT CAPSTAN
DECK JOINT PCB

Fig. 31 Belt Capstan Removal

2-7-2. Motor D/D Capstan Removal

1. Remove the lead connector ass'y ① (Bottom Side).
2. Remove three (3) screws ② (Top Side).
3. Lift up the motor D/D capstan ③ (Bottom Side).

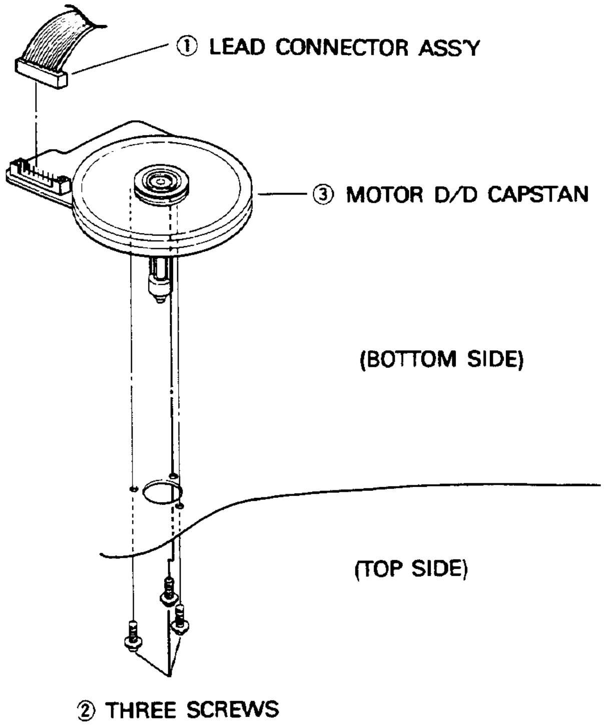

① LEAD CONNECTOR ASS'Y
③ MOTOR D/D CAPSTAN
(BOTTOM SIDE)
(TOP SIDE)
② THREE SCREWS

Fig. 32 Motor D/D Capstan Removal

2-7-3. Bracket Eject Drive & Deck Joint PCB Ass'y Removal

1. Remove three (3) screws ①, plate ground ② and the bracket eject drive ③.
2. Disconnect three (3) lead connectors ass'y ④, ⑤, ⑥ (CN6202, CN6203, CN6204) from each motor.
3. Release two (2) clips ⑦.
4. Lift up the deck joint PCB ⑧.

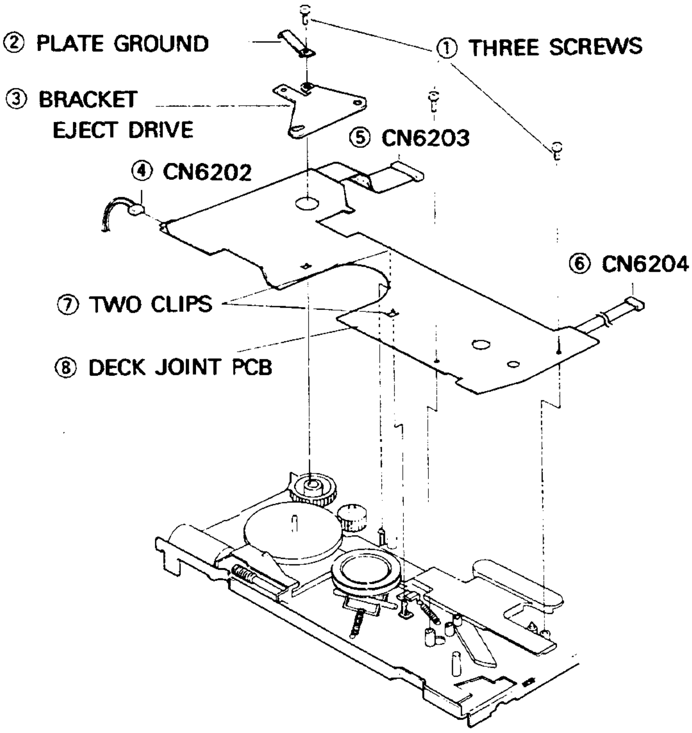

② PLATE GROUND
① THREE SCREWS
③ BRACKET
EJECT DRIVE
⑤ CN6203
④ CN6202
⑥ CN6204
⑦ TWO CLIPS
⑧ DECK JOINT PCB

Fig. 33 Bracket Eject Drive & Deck Joint PCB Ass'y Removal

2-7-4. Clutch Ass'y Removal

1. Remove the washer slit ①.
2. Lift up the clutch ass'y ②.
3. Remove the washer plain ③.

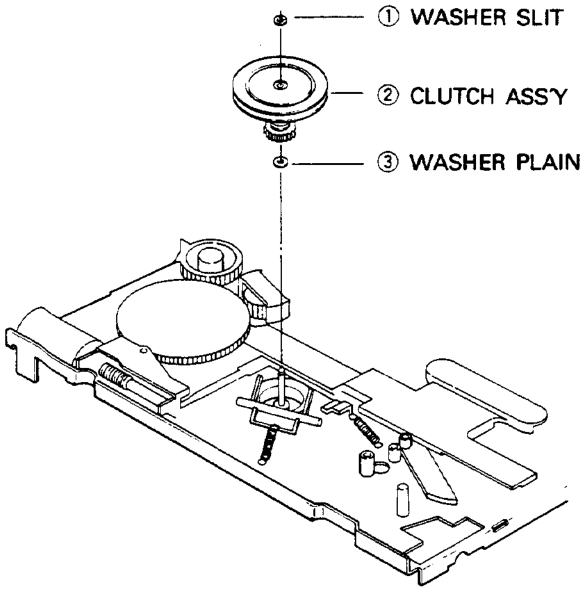

① WASHER SLIT
② CLUTCH ASS'Y
③ WASHER PLAIN

Fig. 34 Clutch Ass'y Removal

2-7-5. Gear Master & Gear Eject Drive Removal

1. Remove the gear master ① in the direction of arrow.
2. Lift up the gear eject drive ②.

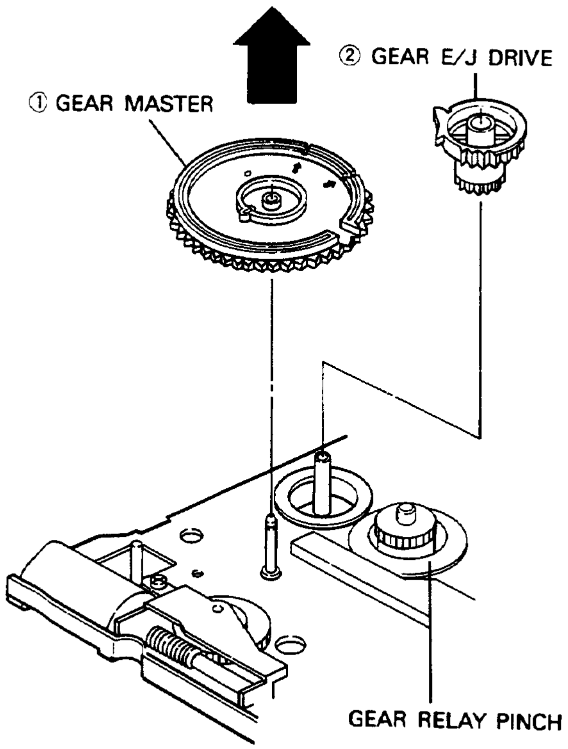

① GEAR MASTER
② GEAR E/J DRIVE
GEAR RELAY PINCH

Fig. 35 Gear Master & Gear Eject Drive Removal

2-7-6. L/D Unit Ass'y & Gear Worm Wheel Removal

1. Disconnect the lead connector ① (CN6202) from deck joint PCB.
2. Remove two (2) screws ②.
3. Lift up the L/D unit ass'y ③.
4. Lift up the gear worm wheel ④.

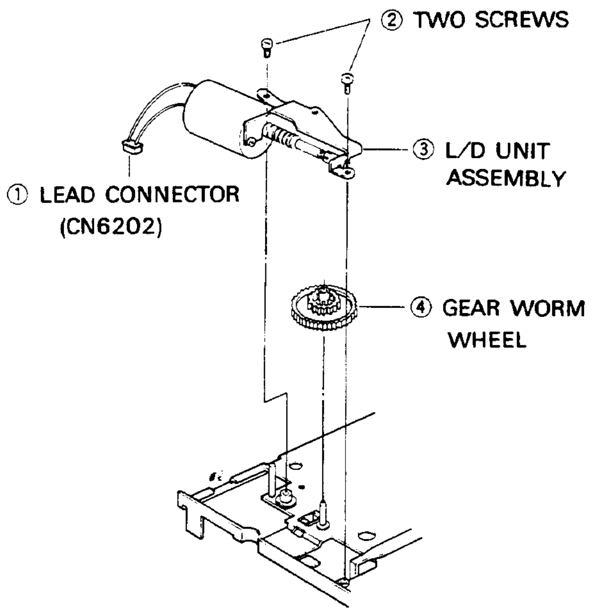

② TWO SCREWS
③ L/D UNIT ASSEMBLY
① LEAD CONNECTOR (CN6202)
④ GEAR WORM WHEEL

Fig. 36 L/D Unit Ass'y & Gear Worm Wheel Removal

2-7-7. Slide Main Removal

1. Remove the washer slit ①.
2. Release the clip ② holding the slide main ③ and then lift up the slide main ③.

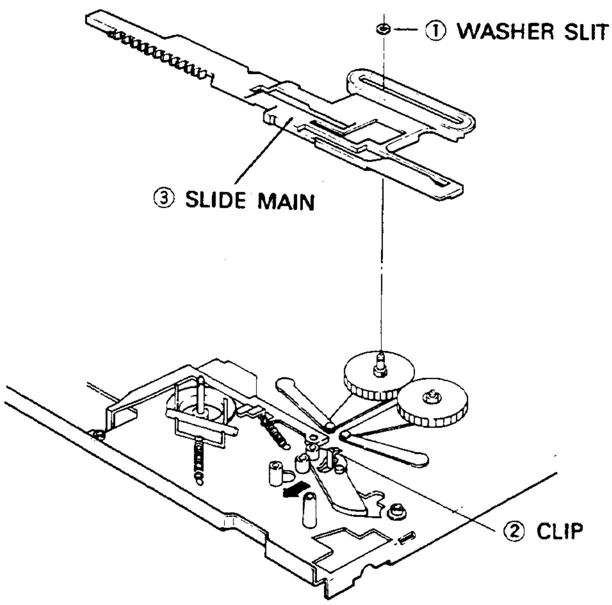
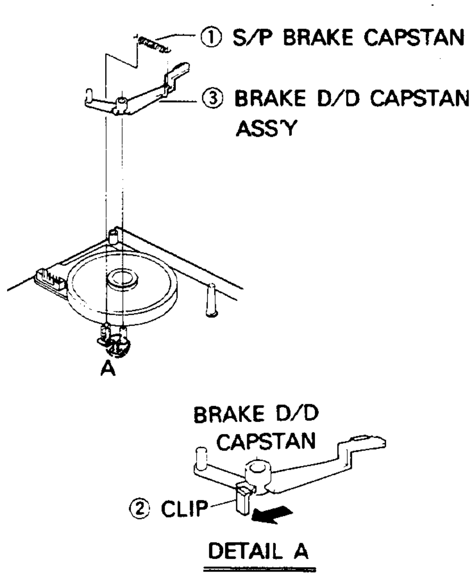

① WASHER SLIT
③ SLIDE MAIN
② CLIP

Fig. 37 Slide Main Removal

2-7-8. Brake D/D Capstan Ass'y Removal

1. Remove the S/P brake capstan ①.
2. Lift up the brake D/D capstan ass'y ③ pushing the clip ② in the direction of arrow.

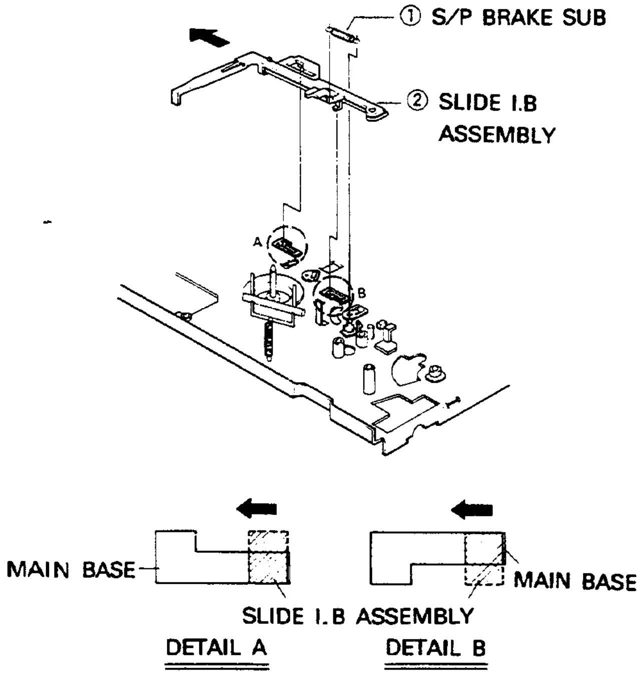


① S/P BRAKE CAPSTAN
③ BRAKE D/D CAPSTAN ASS'Y
A
BRAKE D/D CAPSTAN
② CLIP
DETAIL A

Fig. 38 Brake D/D Capstan Ass'y Removal

2-7-9. Slide I.B Ass'y Removal

1. Remove the S/P brake sub ①.
2. Lift up the slide I.B ass'y ② pushing the slide I.B ass'y ② to the end of the slot in the direction of arrow.

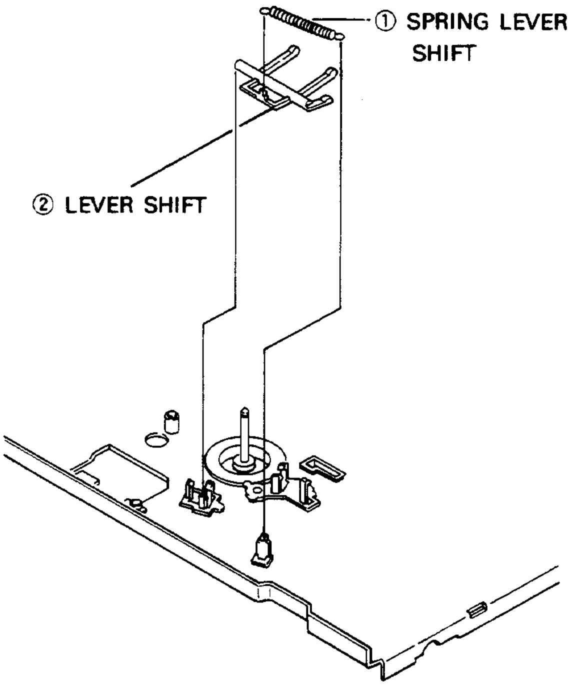


① S/P BRAKE SUB
② SLIDE I.B ASSEMBLY
A
B
MAIN BASE
MAIN BASE
SLIDE I.B ASSEMBLY
DETAIL A
DETAIL B

Fig. 39 Slide I.B Ass'y Removal

2-7-10. Lever Shift Removal

1. Remove the S/P lever shift ①.
2. Lift up the lever shift ② strongly.

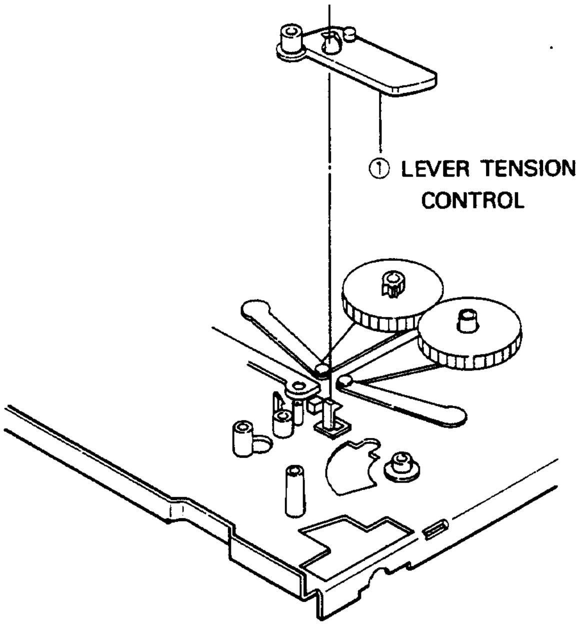


① SPRING LEVER SHIFT
② LEVER SHIFT

Fig. 40 Lever Shift Removal

2-7-11. Lever Tension Control Removal

1. Lift up the lever tension control ①.



① LEVER TENSION CONTROL

Fig. 41 Lever Tension Control Removal

2-7-12. Gear Loading "L", "R" Ass'y Removal

1. Lift up the gear loading "R" ass'y ①.
2. Lift up the gear loading "L" ass'y ③ pushing the gear loading "L" clip ② in the direction of arrow.

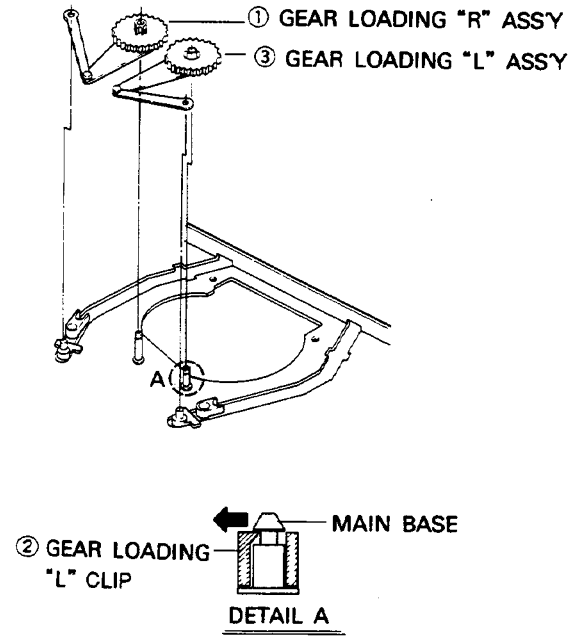

① GEAR LOADING "R" ASS'Y
③ GEAR LOADING "L" ASS'Y
A
MAIN BASE
② GEAR LOADING "L" CLIP
DETAIL A

Fig. 42 Gear Loading "L", "R" Ass'y Removal

2-7-13. Review Arm Ass'y Removal

1. Remove the washer slit ①.
2. Lift up the full review arm ass'y ②.

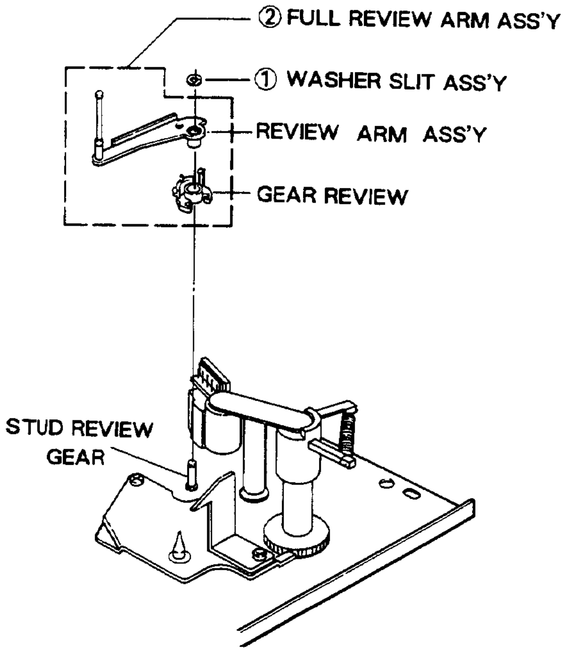

② FULL REVIEW ARM ASS'Y
① WASHER SLIT ASS'Y
REVIEW ARM ASS'Y
GEAR REVIEW
STUD REVIEW GEAR

Fig. 43 Review Arm Ass'y Removal

2-7-14. Drive Cam Pinch Ass'y Removal

1. Remove two (2) screws ①.
2. Lift up the ass'y drive cam pinch ②.

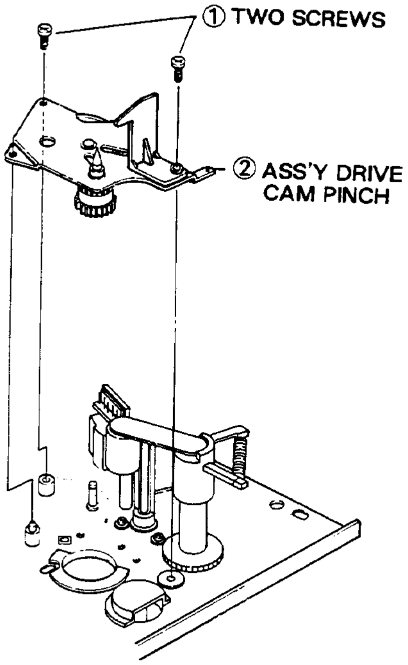

① TWO SCREWS
② ASS'Y DRIVE CAM PINCH

Fig. 44 Drive Cam Pinch Ass'y Removal

2-7-15. Pinch Roller Unit & Gear Escalator Removal

1. Remove the spring pinch roller ①.
2. Remove the washer slit ②.
3. Lift up the arm pinch ass'y ③.
4. Lift up the holder escalator ④ and the gear escalator ⑤.

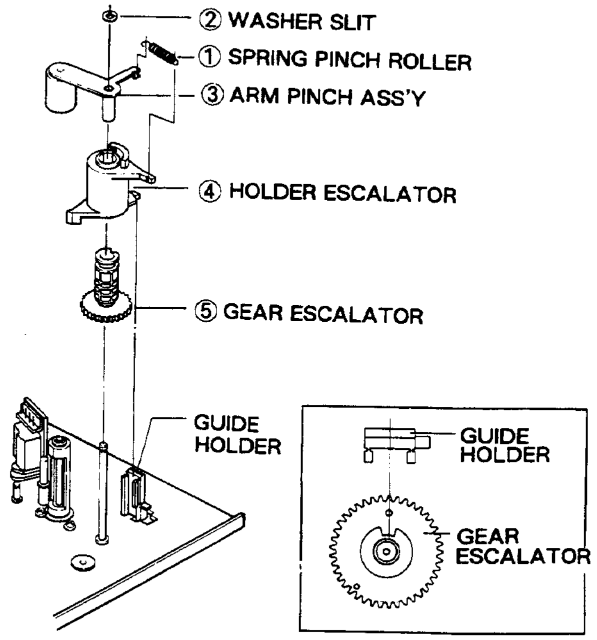

② WASHER SLIT
① SPRING PINCH ROLLER
③ ARM PINCH ASS'Y
④ HOLDER ESCALATOR
⑤ GEAR ESCALATOR
GUIDE HOLDER
GUIDE HOLDER
GEAR ESCALATOR

Fig. 45 Pinch Roller Unit & Gear Escalator Removal

2-7-16. Reassembly of Drive Pinch Ass'y and Gear Escalator

1. Install the gear cam drive ① so that the hole of gear cam drive is aligned with the hole of bracket pinch drive correctly. (Refer to Timing (A))
2. Install the gear cam pinch ② so that the hole of gear cam pinch ② is aligned with the hole of bracket pinch drive as shown in Timing (B).
3. Assemble the gear relay pinch ③ so that the protrusion of gear relay pinch ③ is aligned with the arrow mark on the gear cam drive ①. (Refer to Timing (C))

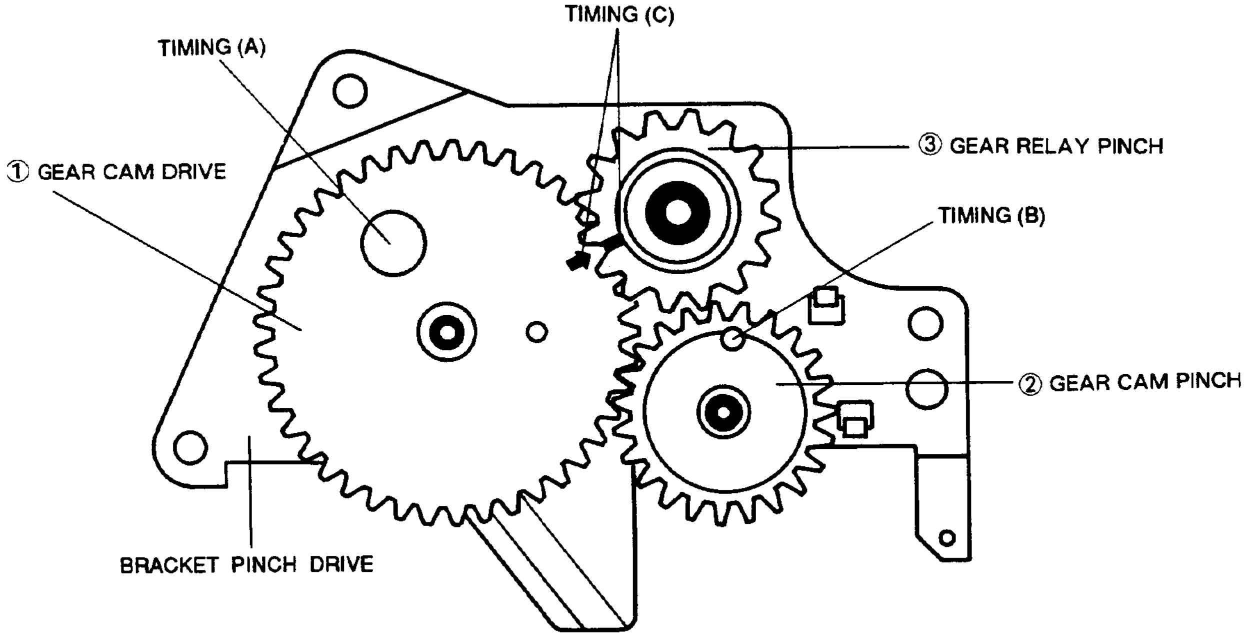

TIMING (C)
TIMING (A)
① GEAR CAM DRIVE
③ GEAR RELAY PINCH
TIMING (B)
② GEAR CAM PINCH
BRACKET PINCH DRIVE

Fig. 46 Timing of Gear Cam Drive, Gear Cam Pinch & Gear Relay Pinch (Bottom View of Drive Pinch Ass'y)

4. Align the arrow mark of gear cam pinch ① with the slot of gear escalator ②. (Refer to Timing (D) in Fig. 47)

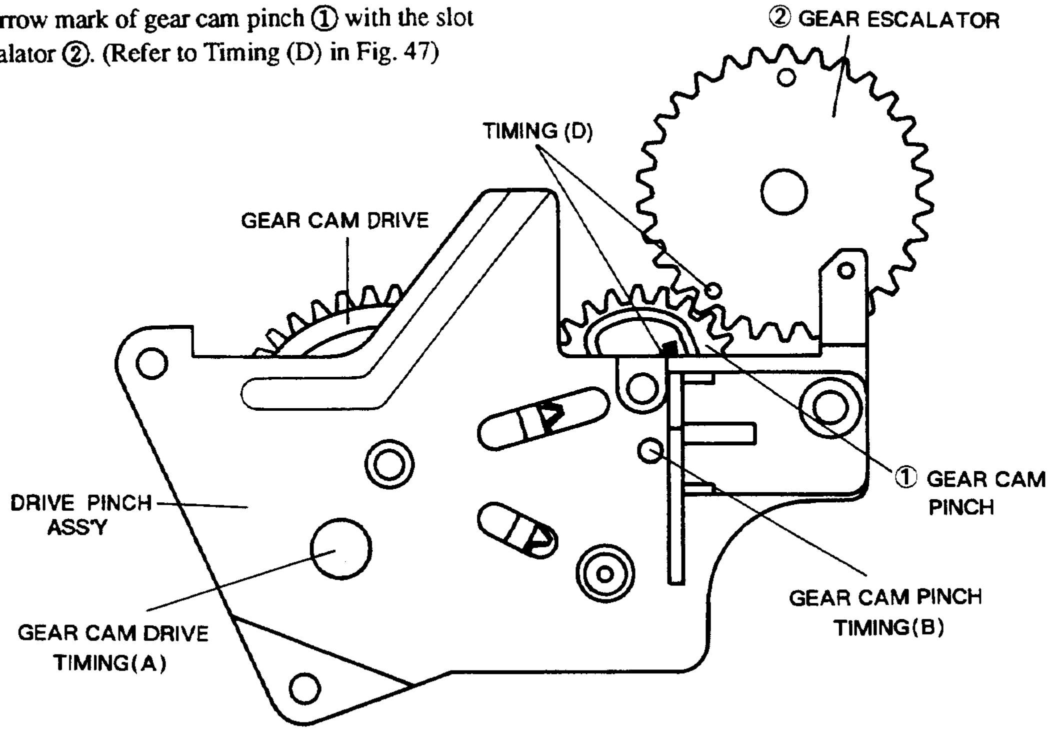

② GEAR ESCALATOR
TIMING (D)
GEAR CAM DRIVE
DRIVE PINCH ASS'Y
① GEAR CAM PINCH
GEAR CAM PINCH TIMING(B)
GEAR CAM DRIVE TIMING(A)

Fig. 47 Reassembly of Drive Pinch Ass'y and Gear Escalator (Top View of Drive Pinch Ass'y)

2-7-17. Reassembly of Full Review Arm Ass'y

1. Assemble the full review arm ass'y ① so that the gear review ② is touched the review stopper ③ as shown in Fig. 48.

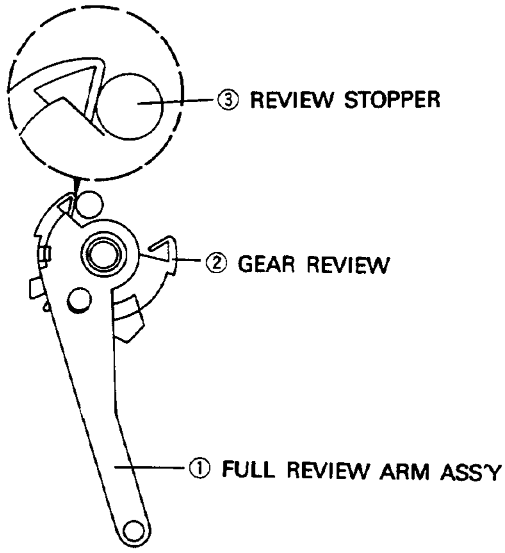

③ REVIEW STOPPER
② GEAR REVIEW
① FULL REVIEW ARM ASS'Y

Fig. 48 Reassembly and Timing of Full Review Arm Ass'y

2-7-18. Reassembly of Gear Loading "L", "R" Ass'y

1. Reassemble the gear loading L/R ass'y in the eject mode while aligning the timing mark. (Refer to Fig. 49)

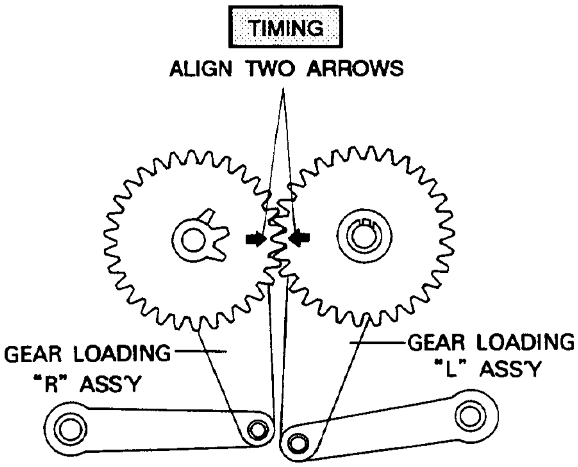

TIMING
ALIGN TWO ARROWS
GEAR LOADING "R" ASS'Y
GEAR LOADING "L" ASS'Y

Fig. 49 Reassembly of Gear Loading "L", "R" Ass'y

2-7-19. Timing of Gear Master & Gear E/J Drive

1. Align the arrow mark of gear master ① with the arrow mark of gear E/J drive ②.

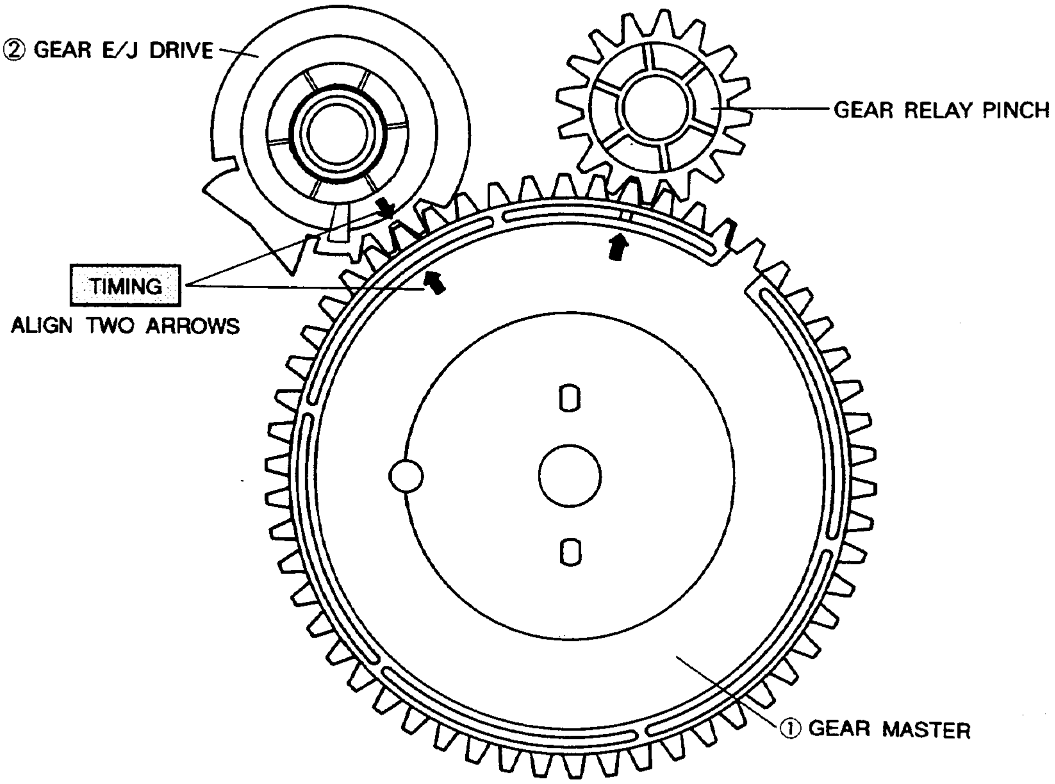

② GEAR E/J DRIVE
GEAR RELAY PINCH
TIMING
ALIGN TWO ARROWS
① GEAR MASTER

Fig. 50 Timing of Gear Master & Gear E/J Drive

2-7-20. Reassembly and Timing of Program S/W and Deck Joint PCB

1. Align the arrow with slot of program S/W ass'y.
2. Reinstall the deck joint PCB to main base.

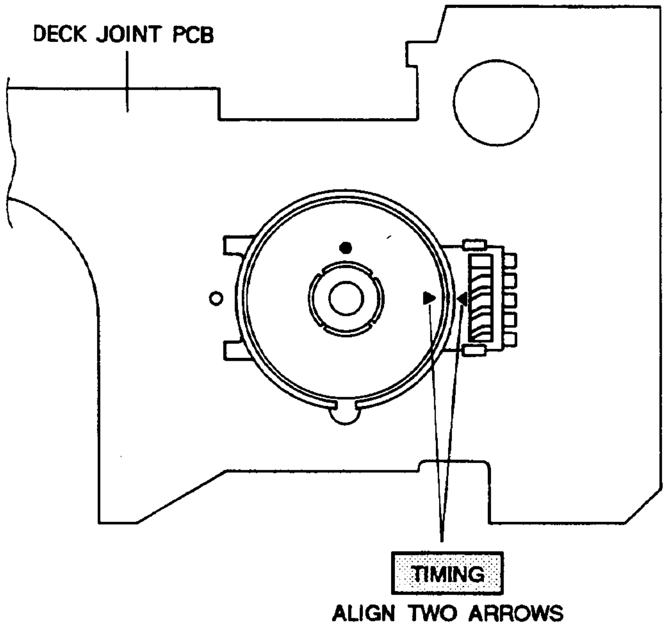

DECK JOINT PCB
TIMING
ALIGN TWO ARROWS

Fig. 51 Timing of Program S/W

2-8. TAPE TRANSPORT ASS'Y REMOVAL & REASSEMBLY

2-8-1. Pole Base "L", "R" Ass'y Removal & Reassembly

1. Move the pole base "L", "R" ass'y ①, ② to the end of slot.
2. Lift up the pole base "L", "R" ass'y ①, ②.
3. Install in reverse order.

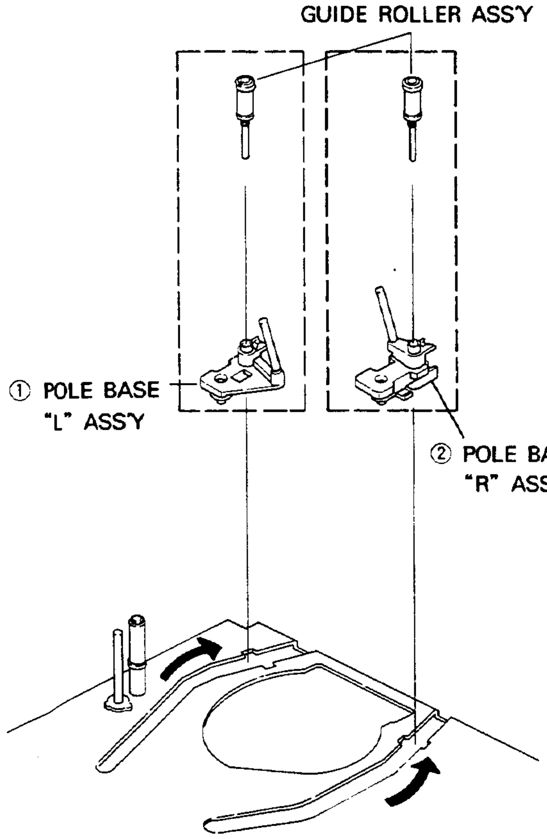

GUIDE ROLLER ASS'Y
① POLE BASE "L" ASS'Y
② POLE BASE "R" ASS'Y

Fig. 52 Pole Base "L", "R" Ass'y Removal

2-8-2. Head Magnetic F/E Removal & Reassembly (Fig. 53)

1. Disconnect the lead connector ass'y ①.
2. Remove one (1) screw ②.
3. Lift up the head magnetic F/E ③.
4. Reinstall in reverse order.

2-8-3. Ass'y A/C Full Removal & Reassembly (Fig. 54)

1. Remove two (2) screws ①.
2. Lift up ass'y A/C full ②.
3. Reinstall in reverse order.

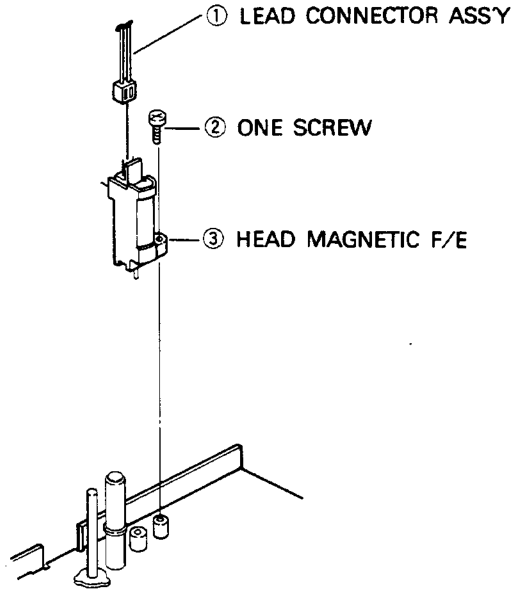

① LEAD CONNECTOR ASS'Y
② ONE SCREW
③ HEAD MAGNETIC F/E

Fig. 53 Head Magnetic F/E Removal

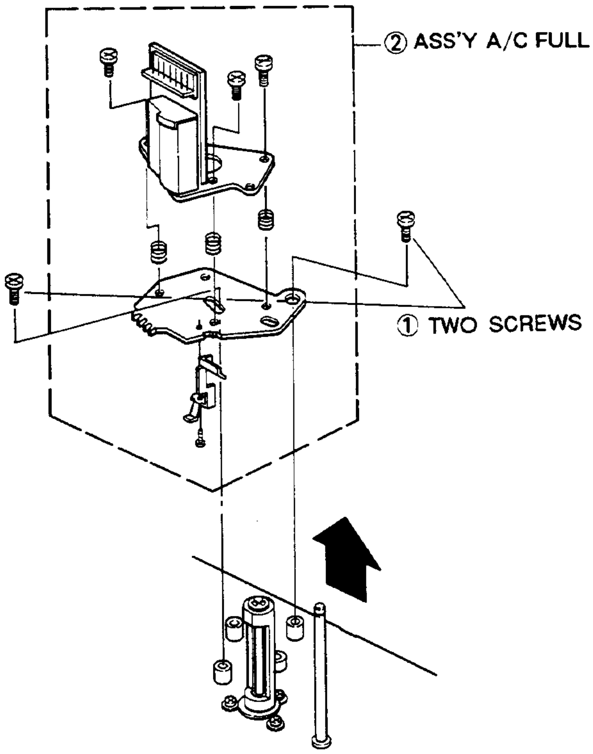

② ASS'Y A/C FULL
① TWO SCREWS

Fig. 54 Ass'y A/C Full Removal

3. MECHANICAL ADJUSTMENT

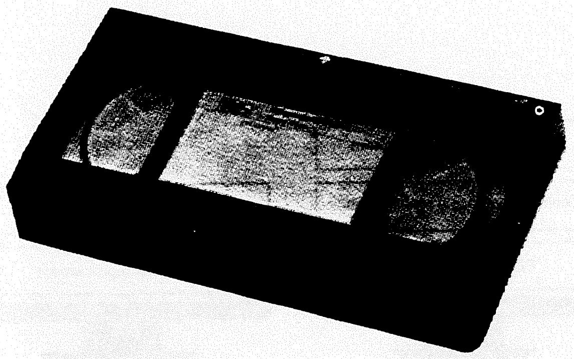
3-1. MECHANICAL ADJUSTMENT TOOL

NO	JIG ITEM	CODE NO.	SPECIFICATION	DESCRIPTION	SKETCH NO.
1	ALIGNMENT TAPE	68140-100-207 68140-100-208 68140-100-210 68140-100-214	PAL ; SR1-2 PAL ; SR2-2 PAL ; SHR2-1 SECAM ; SR2-3	; LION PATTERN ; 6KHz ; COLOR BAR ; 1KHz ; COLOR BAR (Hi-Fi) L : 1KHz, R : 400Hz ; COLOR BAR ; 1KHz	A
2	MASTER PLANE AND REEL DISK HEIGHT JIG	68140-110-101	COMMON	; Use for height adjustment of reel disk and deck plate.	B
3	BACK TENSION CASSETTE TAPE	68140-100-105 (S.N.A)	COMMON	; Use for back tension adjustment of Supply reel.	C
4	TORQUE HEAD GAUGE	68140-100-100	COMMON ; LONG	; Use for torque adjustment of Take-up / Supply reel	D
5	X-POINT ADJUSTING DRIVER	68140-500-100	X-3	; Use for X-point adjustment of A/C head.	E
6	SERVICE JIG KIT	68140-100-301	UPPER CYLINDER REPLACING JIG	; Use for upper cylinder replacement.	F(A)
			DRIVER HANDLE	; Use for connection with each driver.	F(B)
			CAP. ADJ. DRIVER	; Use for CAP nut adjustment and X-position adjustment with A/C head movement.	F(C) ★
			(+) (-) DRIVER	; Use for screw adjustment and A/C head ass'y adjustment.	F(D-G) ★
			N3 BOX DRIVER	; Use for A/C head or roller supply review arm replacement and tape transport adjustment.	F(H)
			HEX WRENCH (0.9mm) HEX WRENCH (1.5mm) HEX WRENCH (2.0mm)	; Use for guide roller set screw fastening. ; Use for audio azimuth adjustment (Differ from item). ; Use for cylinder bush and driver replacement.	F(I)
			CERAMIC DRIVER	; Use for electrical adjustment.	F(J)
			HOUSING ASSEMBLING JIG	; Use for housing assembly.	F(K) ★
			TRANSPORT MECHANICAL ADJUSTING DRIVER	; Use for height adjustment of guide roller for envelope linearity adjustment.	F(L)

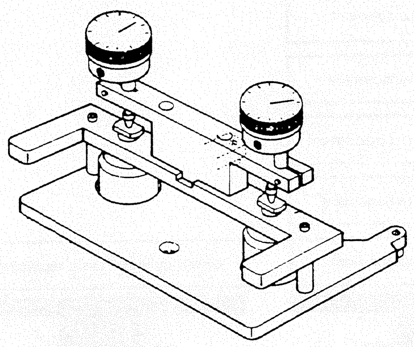
* S.N.A : Service Not Available

★ : The jig is not used for this chassis.

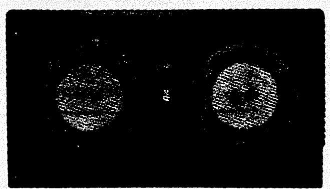
A : ALIGNMENT TAPE



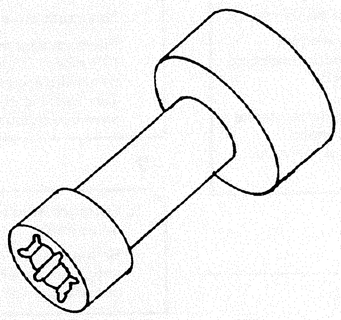
B : MASTER PLANE AND REEL DISK HEIGHT JIG



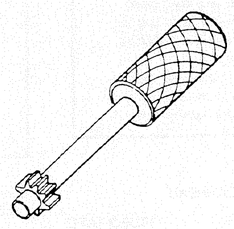
C : BACK TENSION CASSETTE TAPE



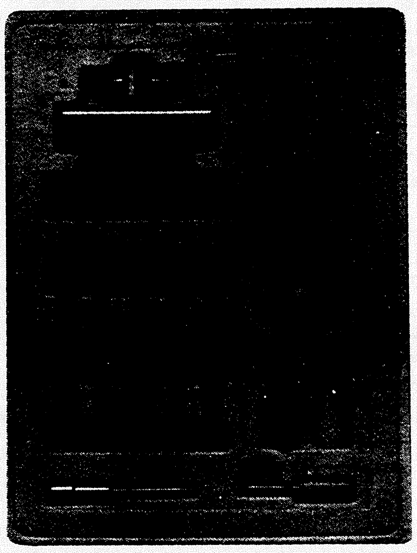
D : TORQUE HEAD GAUGE



E : X-POINT ADJUSTING DRIVER



F : SERVICE JIG KIT



(A) ; UPPER CYLINDER REPLACING JIG

(B) ; DRIVER HANDLE

(C) ; CAP. ADJ. DRIVER

(D - G) ; (+) (-) DRIVER

(H) ; N3 BOX DRIVER

(I) ; HEX WRENCH (0.9mm)
HEX WRENCH (1.5mm)
HEX WRENCH (2.0mm)

(J) ; CERAMIC DRIVER

(K) ; HOUSING ASSEMBLING JIG

(L) ; TRANSPORT MECHANISM ADJUSTING DRIVER

3-2. TAPE TRANSPORT SYSTEM ADJUSTMENT FLOW CHART

Cylinder ass'y replacement

S.T pole base replacement

A/C head ass'y replacement

Capstan motor ass'y replacement

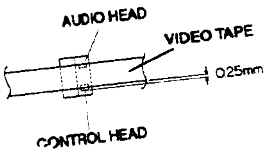
Pinch roller ass'y replacement

Cylinder motor replacement

1) A/C H'd ass'y adjustment

1. A/C H'd height adjustment

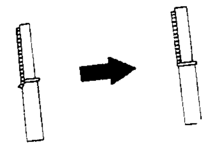
Set the deck to playmode, and adjust head height until control head edge matches to lower tape.
Playback 1KHz audio signal in alignment tape SR2-2 and adjust for max. audio output.



Adjust head height 0.25mm between lower head gauge and lower tape edge.

2. A/C H'd tilt adjustment

Playback a E-240 tape and adjust the A/C tilt adjusting screw for no wrinkle.



Turn counter-clockwise to correct.

3. Audio azimuth adjustment

Playback 6KHz audio signal in alignment tape SR1-2 and adjust for max. audio output.

4. A/C H'd position adjustment

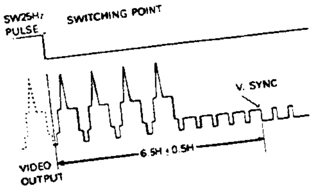
Playback SP mode SR1-2 video signal in alignment tape. Set tracking control at it's center. Adjust adjust driver (X-point) for max.envelope output.

Upper cylinder ass'y replacement

2) Switching point adjustment

1. Switching point adjustment

Playback alignment tape (SR2-2) and observe switching and video signal on oscilloscope.
Adjust VR201 for time interval of 6.5 ±0.5H between switching signal and V sync pulse.



S.T guide rollers replacement

Tension lever ass'y replacement

FE H'd replacement

3) Linearity adjustment (S.T guide roller)

1. Maximum envelope output

Playback alignment tape (SP mode). Trigger the scope with switching pulse.
Turn tracking control for max. envelope output.

2. Entrance side envelope adjustment

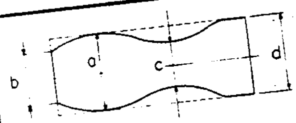
Rotate S-guide roller until entrance side envelope becomes as flat as possible.

3. Exit side envelope adjustment

Rotate T-guide roller until exit side envelope becomes as flat as possible.

4. Linearity check

Turn tracking control clockwise and counter clockwise.
Make sure the envelope increases or decreases keeping flat response.

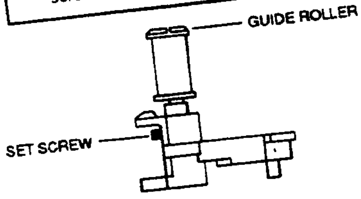


a b c d

c, b, d/a ≧ 63%

5. Tighten the SET screw

After the adjustment is completed, tighten the SET screw.



Idler clutch ass'y replacement

Reel disk replacement

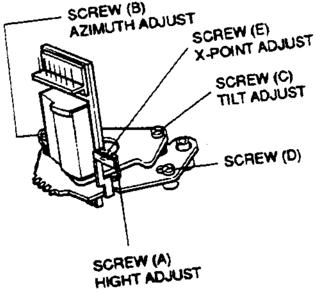
4) A/C H'd ass'y fine adjustment

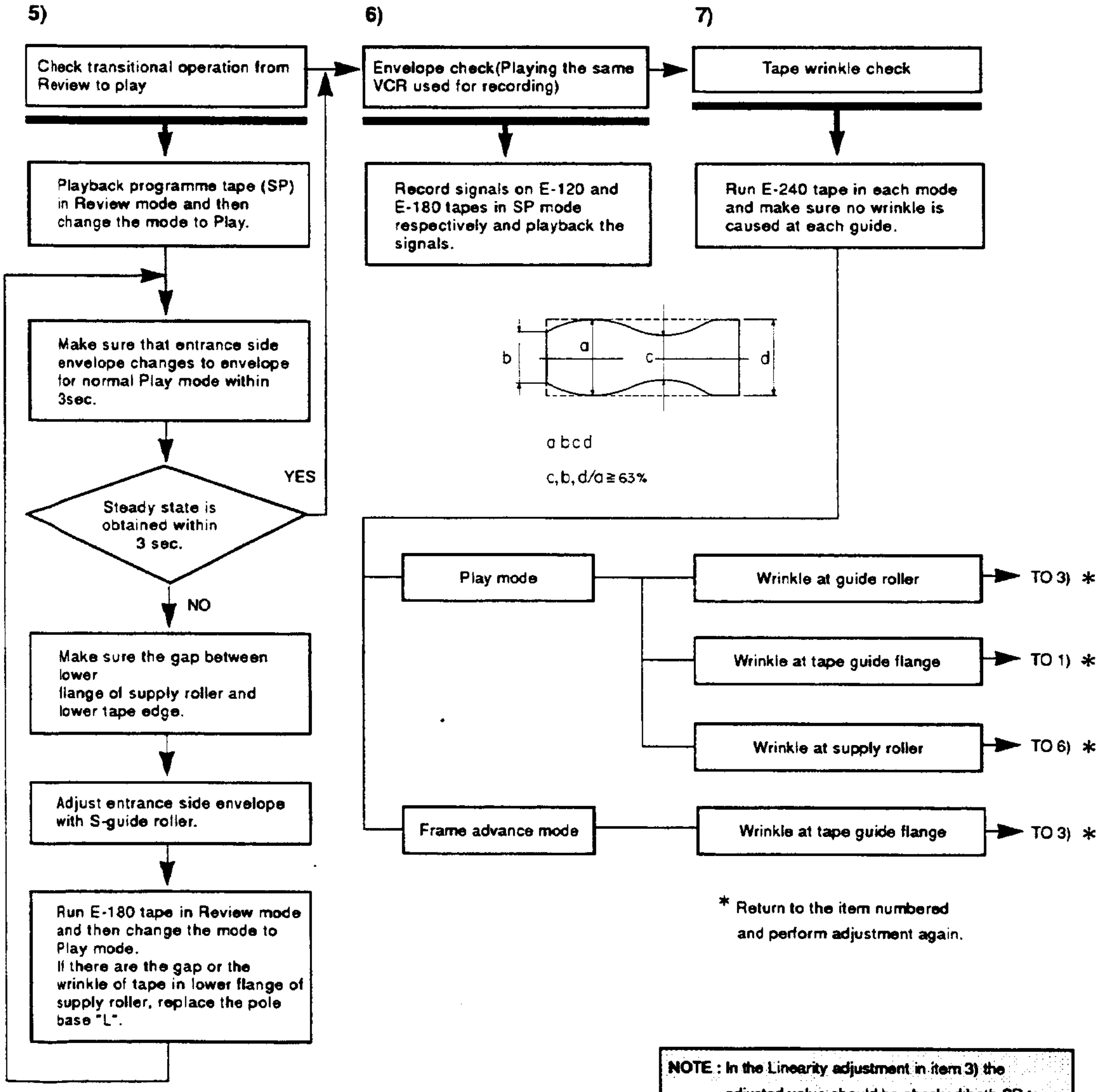
1. Audio azimuth adjustment and height adjustment

Playback SP mode video signal in alignment tape SR1-2.
Measure 6KHz audio signal output with milivoltmeter.
Adjust azimuth adjusting screw for max. audio output.

2. A/C H'd position adjustment

Set tracking control to it's center click position. Playback SP mode white video signal in alignment tape SR1-2 and adjust cam adjustment for maximum envelope output.
Playback alignment tape SR1-2 and make sure envelope is still maximum. If envelope is not maximum, adjust envelope in SP mode again.





5)

Check transitional operation from Review to play

Playback programme tape (SP) in Review mode and then change the mode to Play.

Make sure that entrance side envelope changes to envelope for normal Play mode within 3sec.

Steady state is obtained within 3 sec.

Make sure the gap between lower flange of supply roller and lower tape edge.

Adjust entrance side envelope with S-guide roller.

Run E-180 tape in Review mode and then change the mode to Play mode.
If there are the gap or the wrinkle of tape in lower flange of supply roller, replace the pole base "L".

6)

Envelope check(Playing the same VCR used for recording)

Record signals on E-120 and E-180 tapes in SP mode respectively and playback the signals.

a b c d

$c, b, d/a \geqq 63\%$

7)

Tape wrinkle check

Run E-240 tape in each mode and make sure no wrinkle is caused at each guide.

Play mode

- Wrinkle at guide roller → TO 3) *
- Wrinkle at tape guide flange → TO 1) *
- Wrinkle at supply roller → TO 6) *

Frame advance mode

- Wrinkle at tape guide flange → TO 3) *

* Return to the item numbered and perform adjustment again.

NOTE : In the Linearity adjustment in item 3) the adjusted value should be checked both SP tape.

3-3. TAPE TRANSPORT SYSTEM

Note :
The tape transport system has been adjusted precisely in the factory. Alignment is not necessary except for the followings :
* Noises observed on the screen.
* Tape damage.
* Parts replacement in the tape transport system.

3-3-1. Location of Tape Transport Adjustment (Adjustment Reference)

Lower flange height of tape guide is used as the basic reference for the transport adjustment.
To keep height of the tape guide, do not apply excessive force onto the main base to prevent damage.

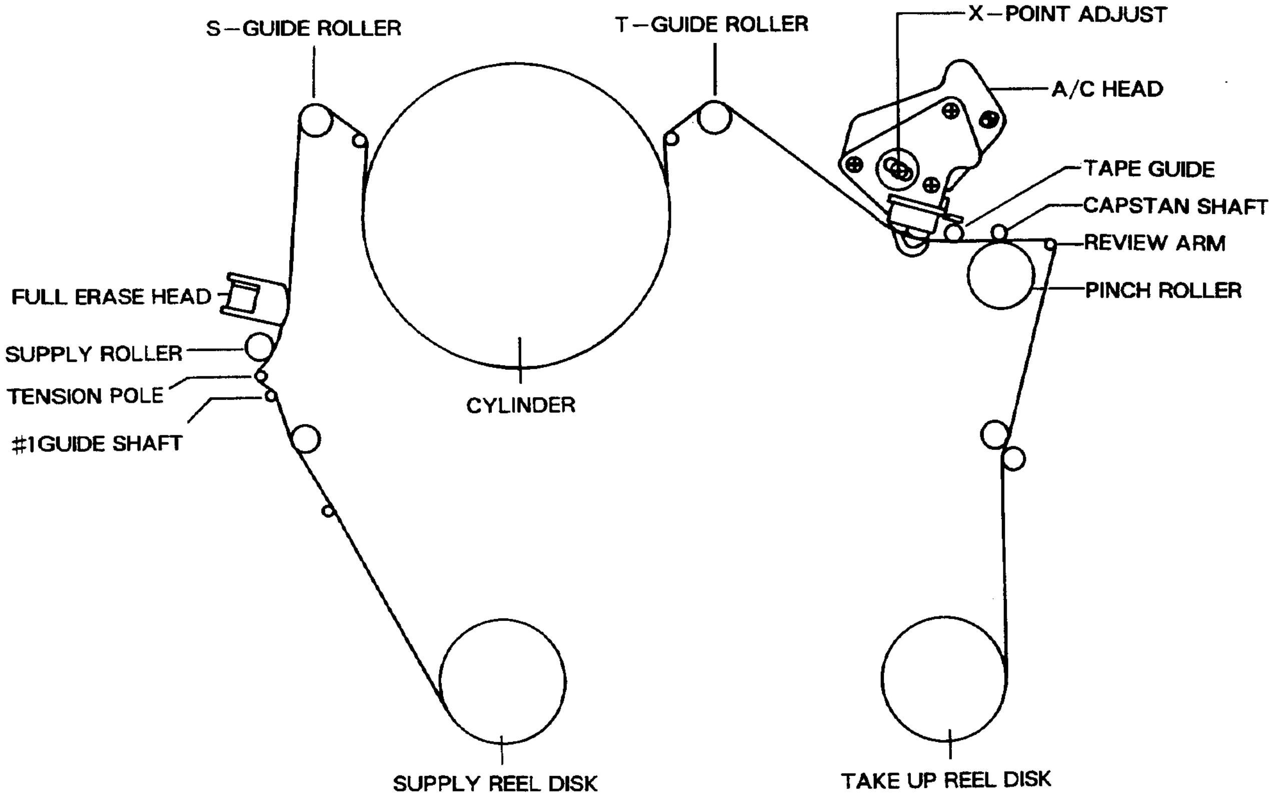

S-GUIDE ROLLER
T-GUIDE ROLLER
X-POINT ADJUST
A/C HEAD
TAPE GUIDE
CAPSTAN SHAFT
REVIEW ARM
PINCH ROLLER
FULL ERASE HEAD
SUPPLY ROLLER
TENSION POLE
#1GUIDE SHAFT
CYLINDER
SUPPLY REEL DISK
TAKE UP REEL DISK

Fig. 1 Location of Tape Transport Adjustment

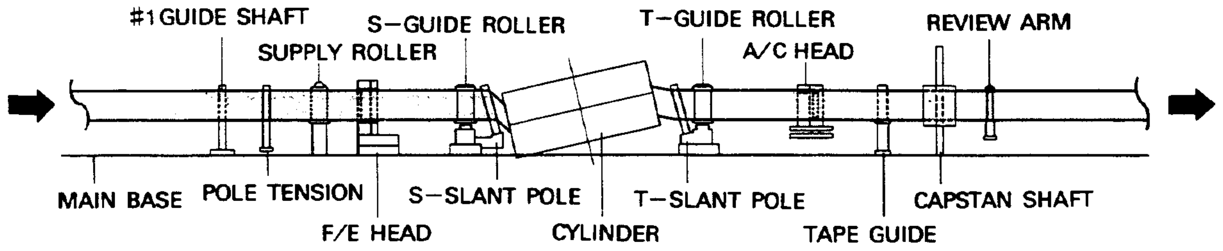

#1GUIDE SHAFT
S-GUIDE ROLLER
SUPPLY ROLLER
T-GUIDE ROLLER
A/C HEAD
REVIEW ARM
MAIN BASE
POLE TENSION
F/E HEAD
S-SLANT POLE
CYLINDER
T-SLANT POLE
TAPE GUIDE
CAPSTAN SHAFT

Fig. 2 Tape Travel Diagram

3-3-2. Tape Transport System Adjustment

1) Pre-adjustment

When the part(s) are replaced, perform required adjustments by referring to procedures for the tape transport system. When the part (s) are replaced, the tape path may be changed.
First run a E-180 tape and make sure excessive tape wrinkle does not occur at each tape guide.

1. If tape wrinkle is observed at the S, T-guide rollers, turn the S,T-guide rollers until wrinkle disappears.
2. If the tape wrinkle is still observed at the tape guide, perform the tilt adjustment of the A/C head.

2) Adjustment procedure

1. A/C head assembly adjustment

Test Point : TP3203 (Envelope)
TP404 (Audio Out)
TP201 (H'D SW - Trigger)
Test Tape : SR2-2 (Color Bar 1KHz)
SR1-2 (Mono Scope 6KHz)
Blank Tape (E-240)

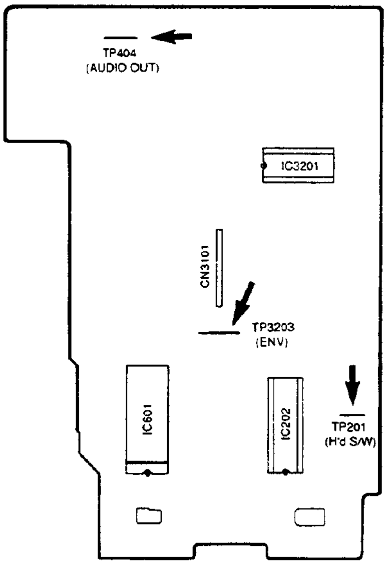

TP404
(AUDIO OUT)
IC3201
CN3101
TP3203
(ENV)
IC601
IC202
TP201
(H'd S/W)

Fig. 3 Location of Test Point (Main PCB)

a. A/C head height adjustment

1. Run the alignment tape SR2-2 in the playback mode.
2. Observe surface of the audio head using a dental mirror.
3. Turn screw (A), (B), (C) clockwies or counterclockwise until the gap of lower tape edge and the lower edge of the control head is about 0.25 mm.
(Refer to Fig. 4 and 5)

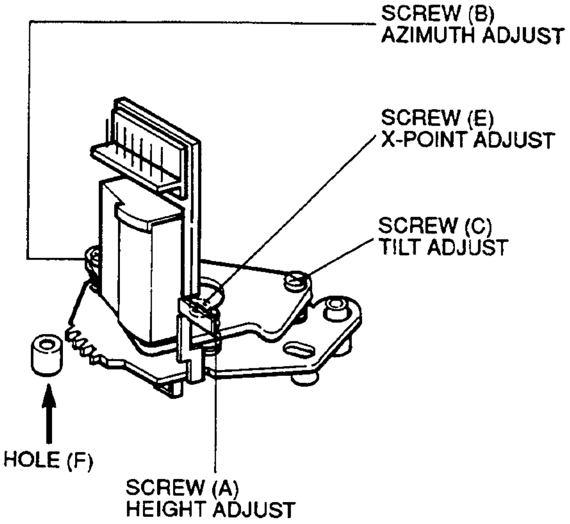

SCREW (B)
AZIMUTH ADJUST
SCREW (E)
X-POINT ADJUST
SCREW (C)
TILT ADJUST
HOLE (F)
SCREW (A)
HEIGHT ADJUST

Fig. 4 Location of A/C Head Adjustment Screw

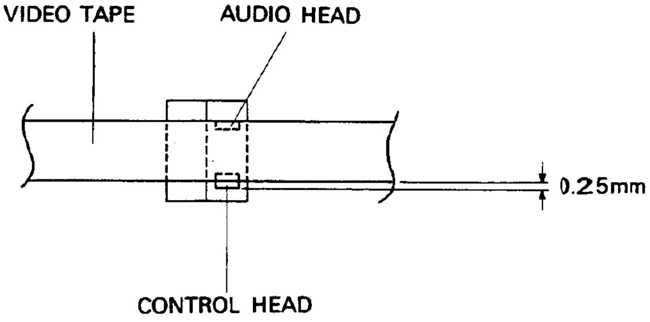

VIDEO TAPE
AUDIO HEAD
0.25mm
CONTROL HEAD

Fig. 5 A/C Head Height Adjustment

b. A/C head tilt adjustment

1. Playback a E-240 tape and observe position of thetape at the lower flange of tape guide.
2. Confirm that there is no curl or wrinkle at the lower flange of tape guide as shown in Fig. 6 (B).
3. If a curl or wrinkle of the tape has occured, slightly turn the screw (C) tilt adjust on the A/C H'd ass'y clockwise until it disappears as shown in Fig. 6 (B).
4. Reconfirm the A/C head height.

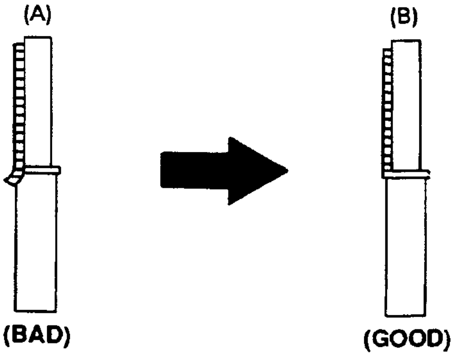


Fig. 6 Tape Guide Check

c. Audio azimuth adjustment

1. Load alignment tape (SR1-2 ; 6KHz) and playback the 6KHz signal.
2. Connect channel-1 scope probe to TP404.
3. Adjust screw (B) vertically to achieve maximum audio level. (See Fig. 4)

d. A/C head position pre-adjustment

1. Remove the panel front.
2. Playback the SR1-2 aligment tape.
3. Connect channel-1 scope probe to TP3204.
4. After playback operation, push the "TRK TEST" button of Timer PCB so that OSD mark on the TV monitor is set as shown in Fig. 8.
5. Turn the screw (E) counterclockwise.
6. Insert the adjusting driver (X-Point) into the hole (F) of main base and adjust the A/C head ass'y so that envelope waveform is maximum amplitude and then tighten the screw (E). (See Fig. 4)

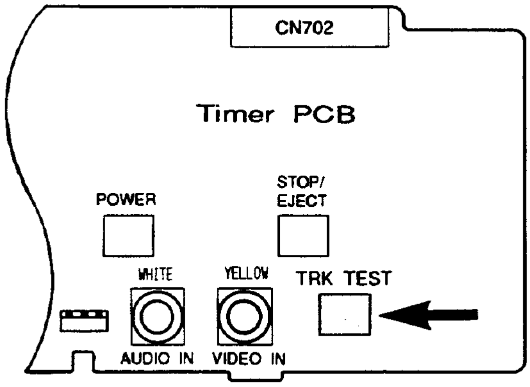

CN702
Timer PCB
POWER
STOP/
EJECT
WHITE
YELLOW
TRK TEST
AUDIO IN
VIDEO IN

Fig. 7 Location of "TRK TEST" Button (Timer PCB)

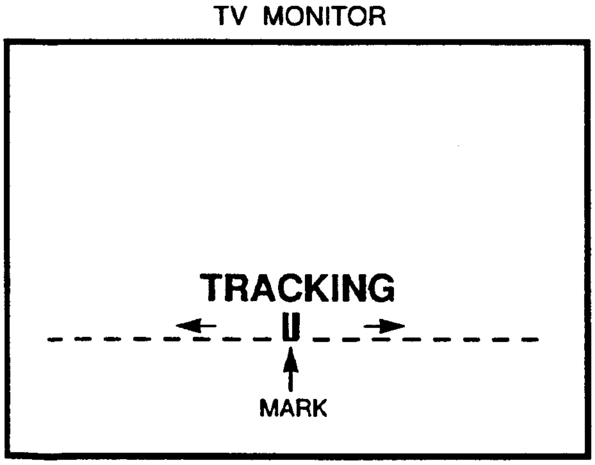

TV MONITOR
TRACKING
MARK

Fig. 8

2. Linearity adjustment (S,T-guide rollers adjustment)

Test Point : TP3203 (Envelope)
TP201 (H'D SW - Trigger)
Test Tape : SR1-2 (Mono Scope 6KHz)

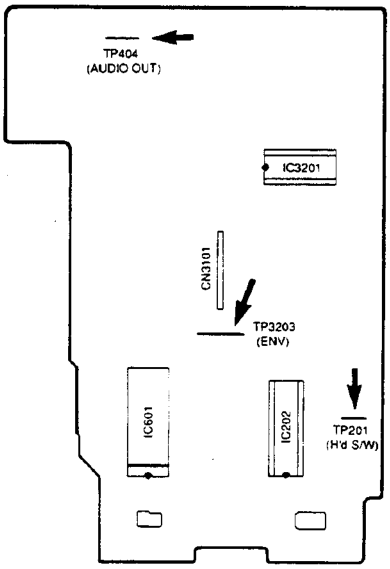
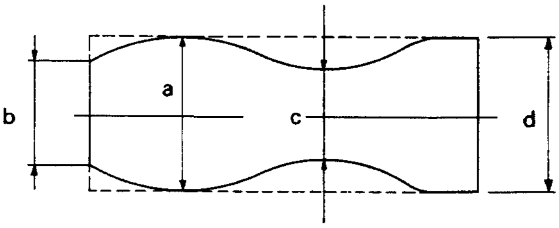

TP404
(AUDIO OUT)
IC3201
CN3101
TP3203
(ENV)
IC601
IC202
TP201
(H'd S/W)

Fig. 9 Location of Test Point (Main PCB)

1. Playback the SR1-2 alignment tape (SP mode).
2. Observe the video envelope signal on an oscilloscope triggered by the video switching pulse.
3. Make sure the video envelope waveform (in its minimum output) meets the specification shown in Fig. 10. If it does not, adjust as follows ;

Note :
a=Maximum output of the video RF envelope.
b=Minimum output of the video RF envelope at the entrance side.
c=Minimum output of the video RF envelope at the center point.
d=Minimum output of the video RF envelope at the exit side.



a b c d

c, b, d/a ≥ 63%

Fig. 10 Envelope Waveform Adjustment

4. If the section A in Fig. 11 does not meet the specification, adjust the S-guide roller up or down.
5. If the section B in Fig. 11 does not meet the specification, adjust T-guide roller up or down.

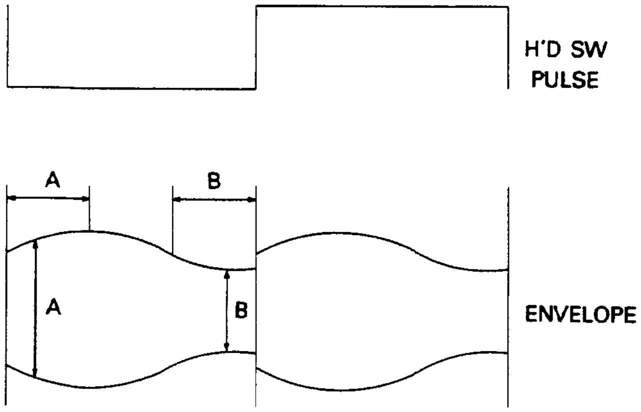

H'D SW
PULSE
A
B
A
B
ENVELOPE

Fig. 11 Adjustment Points

6. Slightly loosen the set screw at the lower part of the S, T-guide rollers with a (Service Jig Kit-I ; Hex Wrench - 0.9mm) so that the guide roller can be adjusted with reasonable tightness. (Refer to Fig. 12)

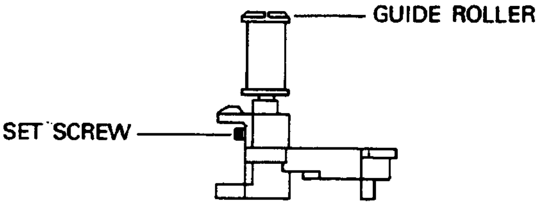

GUIDE ROLLER
SET SCREW

Fig. 12

7. Playback the SR1-2 alignment tape (SP mode).
8. Connect an oscilloscope CH-1 to the TP3204 and CH-2 to the TP201 on the same PCB for triggering.
9. Turn the guide roller heads with a flat head (⊏⌒⊐) screw driver (Service Jig Kit - L) to obtain flat video RF envelope as ideal envelope as shown in Fig. 13.
10. After the adjustment is completed, tighten the loading leader set screws.

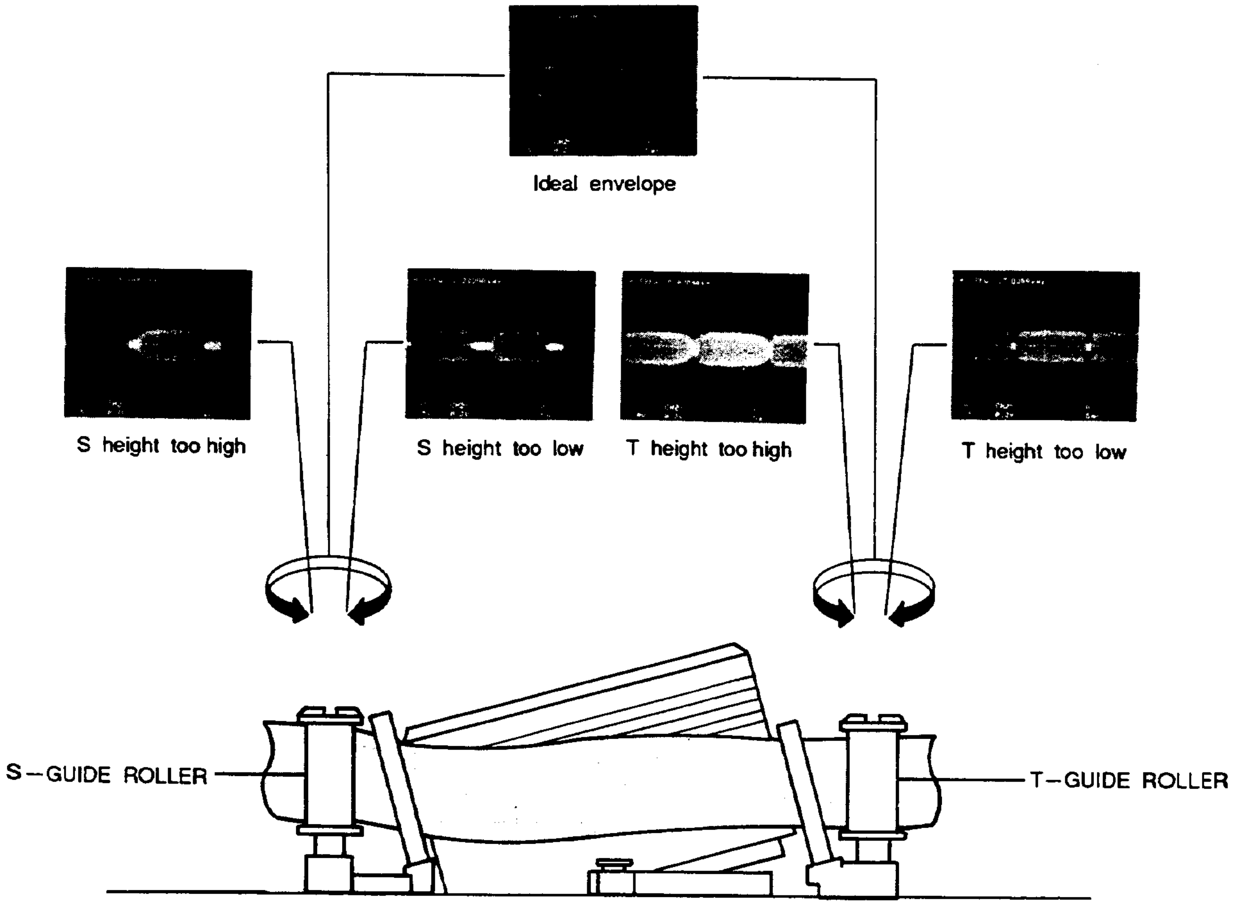

Ideal envelope
S height too high
S height too low
T height too high
T height too low
S–GUIDE ROLLER
T–GUIDE ROLLER

Fig. 13 S, T-Guide Roller Height Adjustments

3. A/C head assembly fine adjustment

Test Point : TP3203 (Envelope)
TP404 (Audio Out)
TP201 (H'D SW - Trigger)
Test Tape : SR1-2 (Mono Scope 6KHz)
SR2-2 (Color Bar 1KHz)
Blank Tape (E-240)

a. A/C head height adjustment

1. Playback the (SR2-2) alignment tape(SP mode).
2. Observe surface of the audio head using a dental mirror.
3. Turn the A/C head height adjusting screw (A), (B), (C) until the gap of lower tape edge and lower edge of the control head is about 0.25mm shown in Fig. 4 and 5.
4. Playback the 1KHz audio signal in the alignment tape and adjust the A/C head height for maximum audio output.

b. Tape wrinkle check at the lower flange of tape guide

1. If tape wrinkle is observed at the lower flange of tape guide, adjust the A/C tilt adjusting screw counterclockwise as shown in Fig. 6 until the wrinkle disappears.
2. If a gap is observed between the lower flange of tape guide and the lower edge of tape, adjust the A/C tilt adjusting screw clockwise until the tape travels along the lower flange.

Note : This adjustment should be done using beginning part of E-240 tape.

c. Azimuth adjustment

1. Playback the SR1-2 alignment tape (6KHz audio on it).
2. Adjust the A/C azimuth adjusting screw (B) for maximum audio output as shown in Fig. 4.

d. A/C head position adjustment

1. Playback the SR1-2 alignment tape (SP mode).
2. Trigger the oscilloscope with the video switching pulse and observe the video envelope waveform.
3. Insert the adjusting driver (X-Point) in to the hole (F) of main base and turn the adjusting driver slowly so that video envelope reach a peak level and then tighten the screw (E). (See Fig. 4)

4. Check for transitional operation from review to play

Check transition from review mode to play mode, using a pre-recorded SP tape, make sure the entrance side of envelope comes to an appropriate steady state within 3 seconds as shown in Fig. 14.

If the envelope waveform does not reach specified peak-to-peak amplitude within 3 seconds, adjust as follows :

1. Make sure there is no gap between the supply roller lower flange and the tape.
If there is a gap, adjustment is not possible.
(Once adjust the supply guide roller again.)
2. Change operation mode from the review to the play mode again and make sure entrance side of envelope rises within 3 seconds.

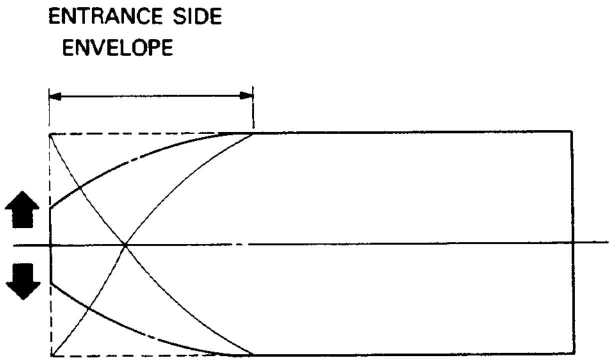


Fig. 14 Video envelope rising when operation mode changes from review to play mode.

5. Envelope check

1. Make recordings on E-120 and E-180 tapes, and make sure the playback output envelope meets the specification as shown in Fig. 15.
2. Playback a self recorded tape (recording made on this unit), (with a E-120) the video envelope should meet the specification as shown in Fig. 15.
In SP mode, (A) should be same as (B).
If the head gap is wide, upper cylinder should be replaced.

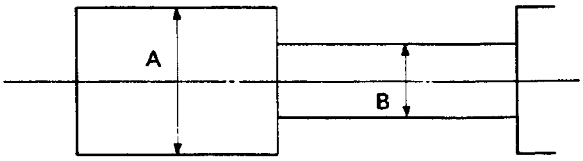


Fig. 15 Envelope Output and Output Level Difference

6. Tape wrinkle check

1. Run the E-240 tape in the playback, FPS, review and the pause mode and then observe tape wrinkle at each guide.
2. If excessive tape wrinkle is observed in the mode shown below, perform the associated adjustment shown below.

a. Playback mode

- Tape wrinkle at the S,T-guide roller section : Linearity adjustment.
- Tape wrinkle at tape guide flange : A/C head assembly coarse adjustment.

3-4. REEL TORQUE

3-4-1. General Features

1. The rotation of the capstan motor operates the clutch ass'y through the belt capstan motor which is directly connected to the assembly clutch.
2. Brake operation and shift operation in FF/REW are done by a slide lever.
3. Transportation of accurate driving force is done by gears. (clutch ass'y)
4. Changeable torque is done by torque control. (clutch ass'y)

MODE	TORQUE g/cm	GAUGE
PB/REC	110 ± 30	Cassette Torquement
RPS	170 ± 30	Cassette Torquement
FF/REW	Min 600	Torque Gauge

Note : If the spec is out of above chart, replace the clutch ass'y and then recheck.

3-4-2. Location of Tension Pole and Back Tension Adjustment

1. Remove the side chassis "L", "R" ass'y and set the deck to play mode.
2. Adjust the cam tension to 0 ~ —0.5mm from the center of supply roller.
3. The back tension meter should be used for adjustment of back tension.

Check back tension, should be 40 ± 5g.cm.
If not, adjust cam tension.

Counterclockwise : Torque UP
Clockwise : Torque DOWN

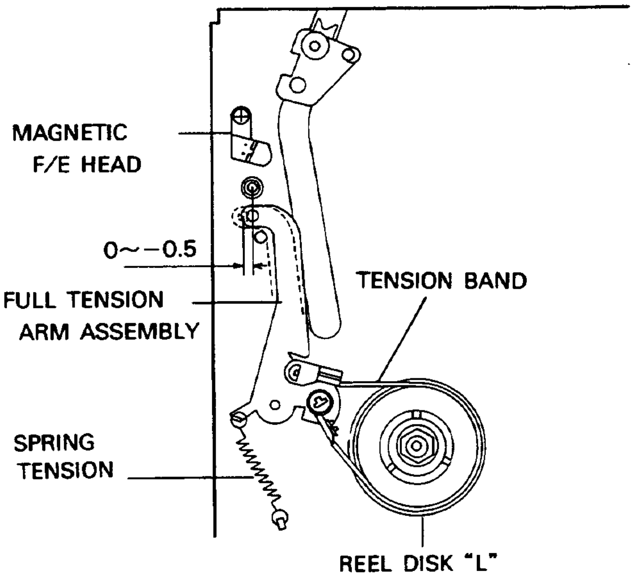


Fig. 16 Tension Pole and Back Tension Adjustment

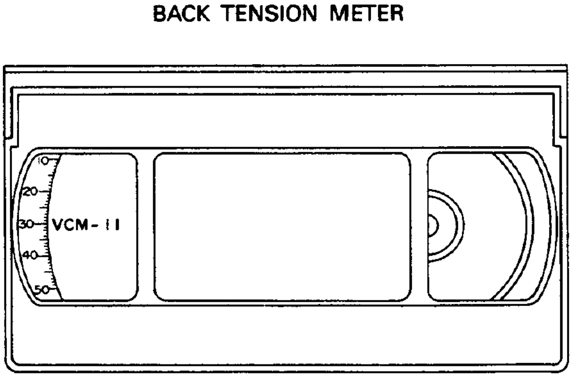


Fig. 17 Back Tension Tape Torque Cassette

3-4-3. Reel Torque Adjustment

1. Reel torque adjustment

a. Review mode
Excessive torque may damage the tape, however weak torque may not wind the tape back in cassette.

b. REC/Play back (Take-Up) mode
Weak torque can not wind the tape to the end, however excessive torque make the tape expand.

c. Inspection
Rewind the torque cassette which is recorded in SP mode to the end and measure the torque shown below.

Reverse Torque : 140 ~ 200g.cm.
Record/Playback Torque : 80 ~ 140g.cm.

2. Reel torque check

a. Load the torque cassette in the VCR and fast forward the tape before proceeding with measurement.

b. Set the VCR to the Review mode and feed the tape for about 15 sec., and then make sure the take-up torque of 140 ~ 200g.cm is obtained while observing the left torque meter.

c. After completion of step a,b set the VCR to the PLAY mode and feed the tape for about 30 sec.
Read the right torque meter and check whether the torque of 80 ~ 140g.cm is obtained.

d. When the review torque and the playback torque are out of limit, replace the clutch assembly.

e. When the clutch assembly is replaced, perform the reel torque check.

3. Precautions for using torque cassette (KT-300NR)

a. Before loading a torque cassette in the VCR, always remove tape slack.
The tape slack can be removed by rotating the reel to its take-up direction. (The tape tends to slack when there is no reel brake actions).

b. When the torque cassette is loaded, confirm the followings.
b-1. Make sure the tape does not ride up or over the tape guide. If it does, do not eject the tape but bring the tape to its correct position, taking care not to damage the tape.
b-2. Make sure the tape has no slack, if it has slack,operate the VCR in FF or REW mode and then stop the tape. Then make sure the tape has no slack.
b-3 After above confirmation, proceed to the reel torque adjustments and confirmation.

c. Cautions for removal of torque cassette.
c-1. When removing the torque cassette from the VCR, set the VCR to the stop mode and wait for several seconds. Then, make sure the tape has no slack. Push the EJECT button to remove the cassette.
c-2. When removing the torque cassette from the VCR, also make sure the tape has no slack inside the cassette lid before pulling the cassette from the VCR. If the tape has no slack inside the cassette lid, carefully bring the tape in place and then pull the cassette.

d. If the previous precautions 1, 2 and 3 are not performed properly, the tape may be damaged and correct measurements can not be performed.

e. Do not use worn out or damaged tape. If they are used, they may damage video heads on the cylinder.
In such a case, always replace the tape with a new one.

4. Reel disk height adjustment

1. Set the jig for reel disk height to the reel disk L, R as shown in Fig. 18.
2. The readings of L, R should be located within ± 0.05.

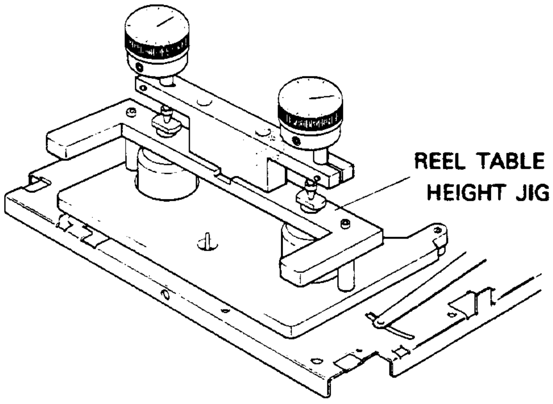


Fig. 18 Reel Disk Height

4. ELECTRICAL ADJUSTMENTS

4-1. PREPARATION

Electrical adjustments are required after replacing circuit components and certain mechanical parts.
It is important to perform these adjustment only after all repairs and replacements have been completed. Also, do not attempt these adjustments unless the proper equipment is available.

4-1-1. Required Test Equipment

1. Color Television or Monitor.
2. Oscilloscope : wide-band, dual-trace, triggered delayed sweep.
3. Trackingscope.
4. Monitor scope.
5. AC Voltmeter.
6. DC Voltmeter.
7. Signal Generator : RF/IF Sweep/Marker
8. PAL TV Channel Signal Generator.
9. Recording tape (Blank tape).
10. Alignment tapes : SR1-2, SR2-2.

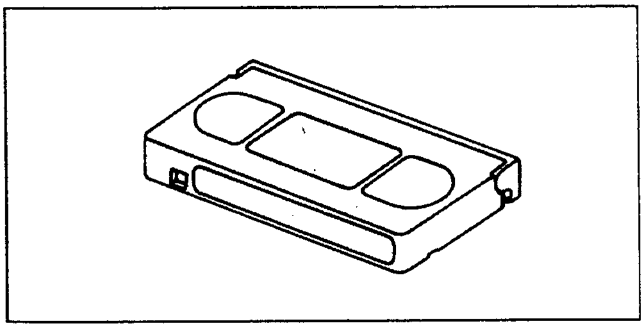


Fig. 1 Tape

11. Pattern Generator : PAL color bar. 100% White.

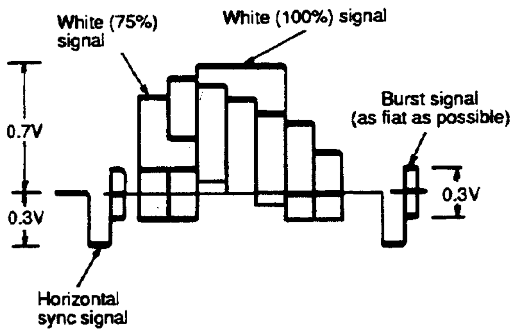
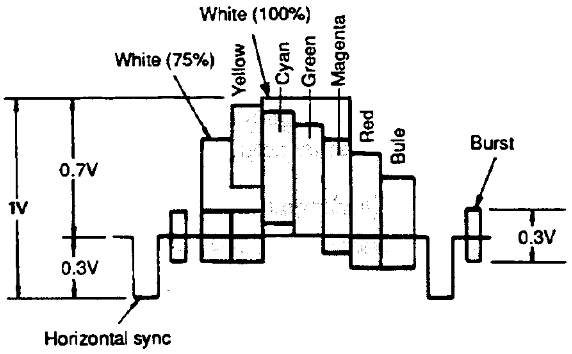
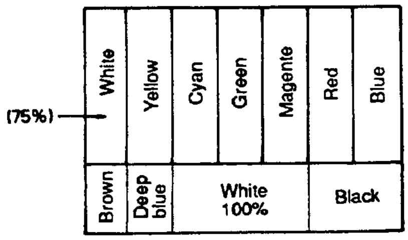

White (75%) signal
White (100%) signal
Burst signal (as flat as possible)
0.7V
0.3V
0.3V
Horizontal sync signal

Fig. 2 Color bar signal of pattern generator

(Color Bar Signal)
The 75% color bar signal recorded on the alignment tape is shown in Fig. 3.


White (100%)
White (75%)
Yellow
Cyan
Green
Magenta
Red
Bule
Blue
Burst
0.7V
1V
0.3V
0.3V
Horizontal sync

Color bar signal waveform


(75%)
White
Yellow
Cyan
Green
Magente
Red
Blue
Brown
Deep blue
White 100%
Black

Color bar pattern

Fig. 3 Color bar signal of alignment tape

4-1-2. Alignment Tape Contents

Tape	Video Signal	Audio Signal	Applications
SR2-2 (SP)	Color Bars	1 KHz	* Video signal playback circuit checks and adjustments. * Audio signal playback circuit checks and adjustments.
SR1-2 (SP)	Monoscope	6 KHz	* Interchangeability checks and adjustments. * SERVO circuit check and adjustments. * Audio head azimuth adjustments.

4-1-3. Check and Adjustment Steps

The check and adjustment steps are provided in the form of charts.
For clarity, the nomenclature used in the charts is outlined below.

No.	Checks and adjustments are numbered in the recommended sequence in which they are to be performed.
Item	Name assigned to the particular check and adjustment step.
Check Point	Location to which measuring instrument (oscilloscope unless otherwise noted) is to be connected.
Adjustment Parts	Variable component (resistor, capacitor, etc.) to be adjusted in this step.
Signal	Input signal required to perform adjustment.
Mode	Equipment operating mode at time of check of adjustment.
100% White	100% White signal as video input.
Color bar	Color bar signal as video input.
1KHz	Supply a 1KHz sinewave as audio input signal.
STOP	Power on and machine in stop mode.
E-E	Electronic to Electronic.
REC	Recording mode.
PB	Playback mode.
SR2-2	Playback SR2-2 alignment tape.
SR1-2	Playback SR1-2 alignment tape.
STILL	Playback then pause.

4-1-4. Input/Output Level Impedance

Video input :	RCA jack (Front) ; 0.5 to 2Vp-p 75 Ω unbalanced
	Socket jack (Rear) ; 0.5 to 2Vp-p 75 Ω unbalanced
Video output :	Socket (Rear) ; 1 ± 0.1 Vp-p 75 Ω unbalanced
Audio input :	RCA jack (Front) ; -8dBm 50 KΩ unbalanced
	Socket jack (Rear) ; -8dBm 50 KΩ unbalanced
Audio output :	Socket jack (Rear) ; -6 ± 3dBm 1 KΩ unbalanced

4-2. SERVO & VIDEO

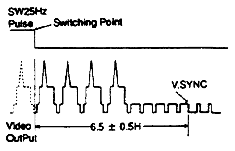
STEP	ADJUSTMENT ITEM
1. MODE and INPUT SIGNAL/ALIGNMEMT TAPE 2. TEST POINT and ADJ. part 3. RESULT & REMARKS	

ADJ. part →

Test Point - - →

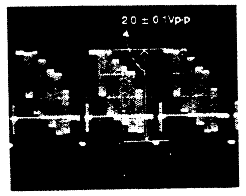
1	SWITCHING POINT

1. "PB", Alignment tape SR2-2.
2. TP201 (H'd SW P), TP3202 (VIDEO OUT) & VR201 (SW POINT).
3. * Connect an oscilloscope's CH-1 to TP201 for triggering and CH-2 to TP3202.
   * Adjust VR201 so that the switching point is positioned 6.5 ± 0.5 H from the V-SYNC left edge as shown.


SW25Hz Pulse
Switching Point
V.SYNC
Video OutPut
6.5 ± 0.5H

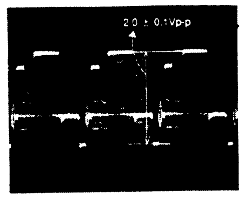
2	VIDEO E-E LEVEL

1. "E-E" (stop mode), PAL color bar signal (LINE or AV).
2. TP3202 (VIDEO OUT) & VR3206 (E-E LEVEL).
3. * Connect an oscilloscope CH-1 to TP3202.
   * Adjust VR3206 for 2.0 ± 0.1 Vp-p from sync tip to white peak level.



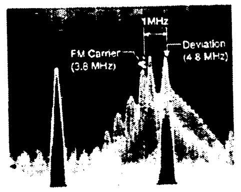
3	VIDEO PB LEVEL

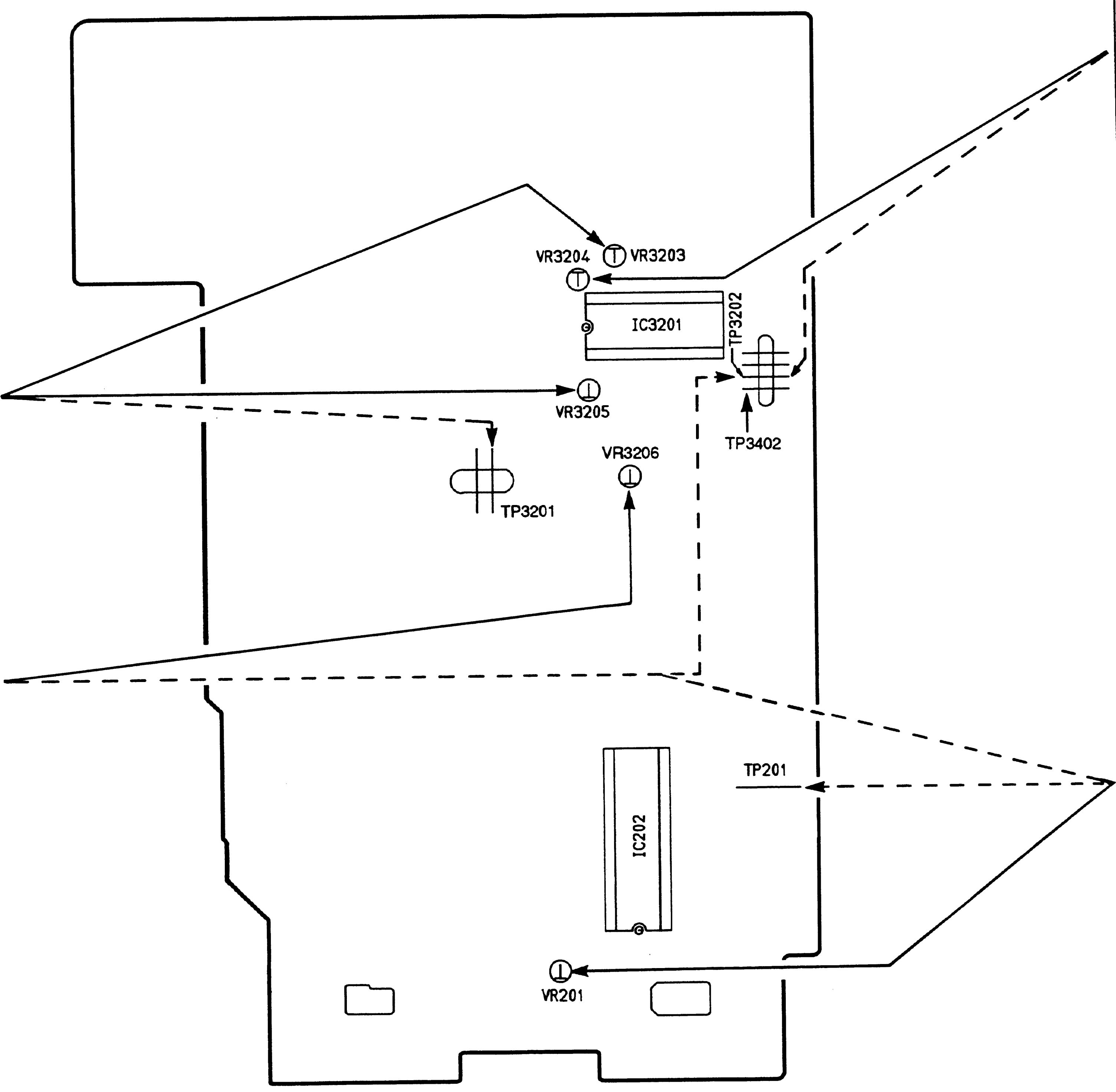
1. "PB", Alignment tape SR2-1.
2. TP3202 (VIDEO OUT) & VR3204 (PB LEVEL).
3. * Connect an oscilloscope CH-1 to TP3202.
   * Adjust VR3204 so that PB level becomes 2.0 ± 0.1 Vp-p.



4	FM CARRIER & DEVIATION

1. "REC", 100% white signal (LINE or AV).
2. TP3201 (FM C/D) & VR3203 (DEVIATION), VR3205 (FM CARRIER).
3. * Connect tracking scope to TP3201.
   * Adjust VR3205 so that the frequency is 3.8 ± 0.1 MHz.
   * Adjust VR3203 so that the frequency is 4.8 ± 0.1 MHz.



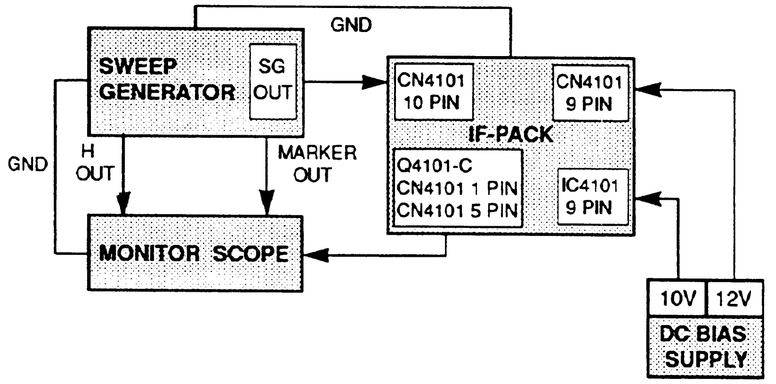

VR3204
VR3203
IC3201
TP3202
VR3205
TP3402
VR3206
TP3201
TP201
IC202
VR201

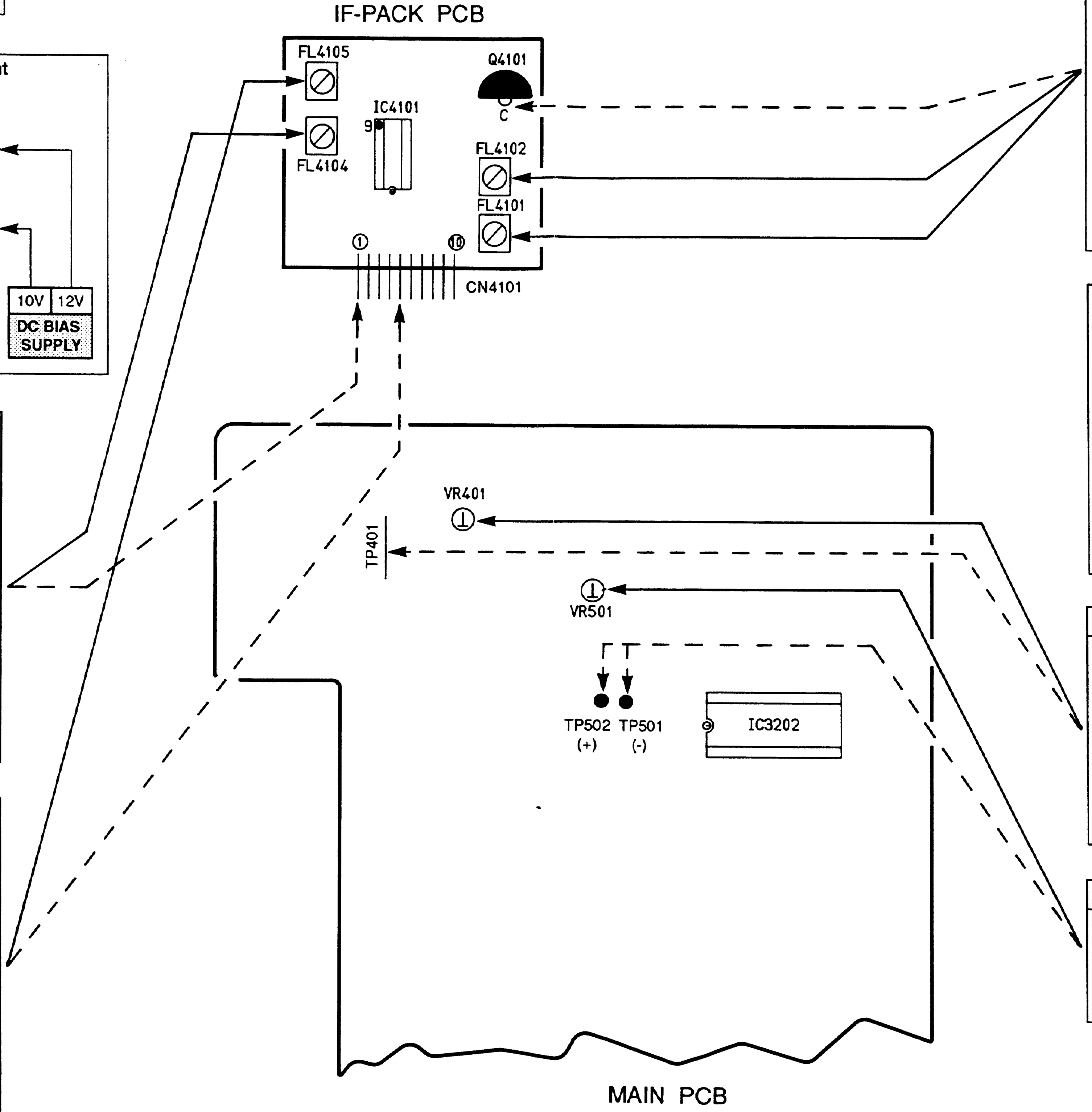
MAIN PCB

4-3. IF-PACK/TUNER & AUDIO SECTION

Note :
"1. TRAP, 2. VIF, 3. AFT" adjustment should be performed after removing IF-PACK PCB from Main PCB.

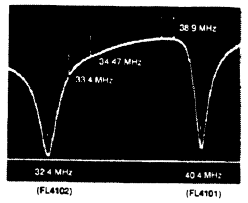
*** Composition for IF-PACK (TRAP, VIF, AFT) Adjustment**


GND
SWEEP GENERATOR
SG OUT
GND
H OUT
MARKER OUT
CN4101 10 PIN
CN4101 9 PIN
IF-PACK
Q4101-C
CN4101 1 PIN
CN4101 5 PIN
IC4101 9 PIN
MONITOR SCOPE
10V
12V
DC BIAS SUPPLY

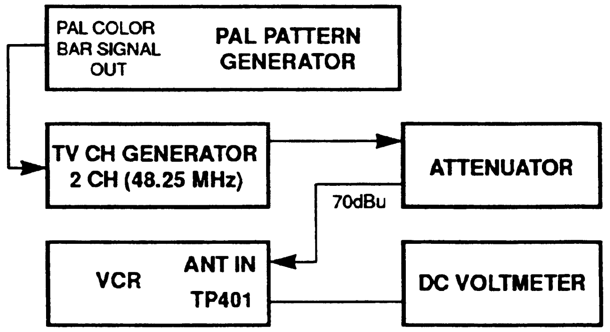

IF-PACK PCB
FL4105
Q4101
IC4101
9
C
FL4104
FL4102
FL4101
①
⑩
CN4101
VR401
TP401
VR501
TP502
TP501
(+)
(-)
IC3202
MAIN PCB

1 TRAP

1. "E-E", sweep generator output
2. Q4101 - Collector (IF-OUTPUT) & FL4101 (40.4 MHz), FL4102 (32.4 MHz)
3. * Connect DC bias supply of 12V to the B+ pin (9 pin) of CN4101 on the IF-PACK PCB.
   - * Connect the sweep generator output to the IF-PACK PCB 10 pin of CN4101.
   - * Connect monitor scope probe to the collector of Q4101 (IF OUT).
   - * Adjust TRAP so that waveform frequency on the monitor scope becomes 40.4 MHz (FL4101), 32.4 MHz (FL4102).

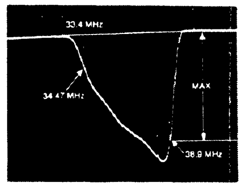


*** Composition for RF AGC Adjustment**


PAL COLOR BAR SIGNAL OUT
PAL PATTERN GENERATOR
TV CH GENERATOR 2 CH (48.25 MHz)
ATTENUATOR
70dBu
VCR
ANT IN
TP401
DC VOLTMETER

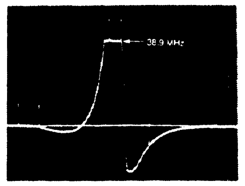
2 VIF

1. "E-E", sweep generator output
2. CN4101-1 pin (VIDEO OUT) & FL4104 (38.9 MHz - Maximum)
3. * Connect DC bias supply of 12V, 10V to the B+ pin (9 pin) of CN4101, 9 pin of IC4101 on the IF-PACK PCB.
   - * Connect the sweep generator output to the IF-PACK PCB 10 pin of CN4101.
   - * Connect monitor scope probe to the 1 pin of CN4101 (VIDEO OUT).
   - * Adjust FL4104 (VIF-DET TANK) so that waveform frequency on the monitor scope becomes 38.9 MHz (Maximum).



3 AFT

1. "E-E", sweep generator output
2. CN4101-5 pin (AFT OUT) & FL4105 (38.9 MHz)
3. * Connect DC bias supply of 12V, 10V to the B+ pin (9 pin) of CN4101, 9 pin of IC4101 on the IF-PACK PCB.
   - * Connect the sweep generator output to the IF-PACK PCB 10 pin of CN4101.
   - * Connect monitor scope probe to the 5 pin of CN4101 (AFT OUT).
   - * Adjust FL4105 (AFT-BAL TANK) so that waveform frequency on the monitor scope becomes 38.9 MHz.



4 RF AGC

1. "E-E' (stop mode), RF signal
2. TP401 & VR401
3. * Apply PAL color bar signal to the video input terminal of the TV channel generator and set channel selector to 2 CH (48.25 MHz).
   - * Adjust the point signal level so that the output of attenuator is 70 dBu.
   - * Apply the output of attenuator to the ANT IN terminal of VCR.
   - * Set the channel of VCR to CH2.
   - * Connect DC voltmeter to TP401.
   - * Adjust VR401 for DC 4.7 ± 0.1V.

5 AUDIO BIAS LEVEL

1. "REC", (no signal input)
2. TP501, TP502 & VR501
3. * Connect AC voltmeter probes to TP501 (ground), TP502.
   - * Adjust VR501 so that the reading on the AC voltmeter becomes 2.7mVrms.

5. MICOM IC PIN FUNCTION CHART/PROGRAM SWITCH TIMING CHART

5-1. SYSTEM AND TIMER CONTROL IC PIN FUNCTION DESCRIPTION

- System and Timer Control Microcomputer μ PD75216ACW (One Chip)

5-1-1. Circuit/Mode/Mechanism Control Microcomputer μ PD75216ACW (IC601 on Main Board)

1. Function description

1) Power ON/OFF control
2) Servo serial data
3) Loading motor control
4) Error detection
   Drum rotation
   Mechanism position
5) Sensor :
   Start sensor
   End sensor
   No cassette
6) L.T.C
7) Auto rewind
8) Circuit control
9) Slow control

2. Abbreviated specifications

- High-speed instruction cycle ; 0.95us
- Program memory : 16256 x 8
- Data memory (RAM) : 512 x 4
- Memory for bit manipulation
- General-purpose register
- Accumulators
- Vector interrupt function
- 8-bit basic interval timer
- Two 8-bit timer/event counters
- 8-bit serial interface
- On-chip power-on reset circuit
- Internal clock oscillator for crystal/ceramic resonator
- Standby operation (STOP/HALT)
- Process : C-MOS
- Operating Voltage : 5V ± 10%
- Package : 64-pin Dip

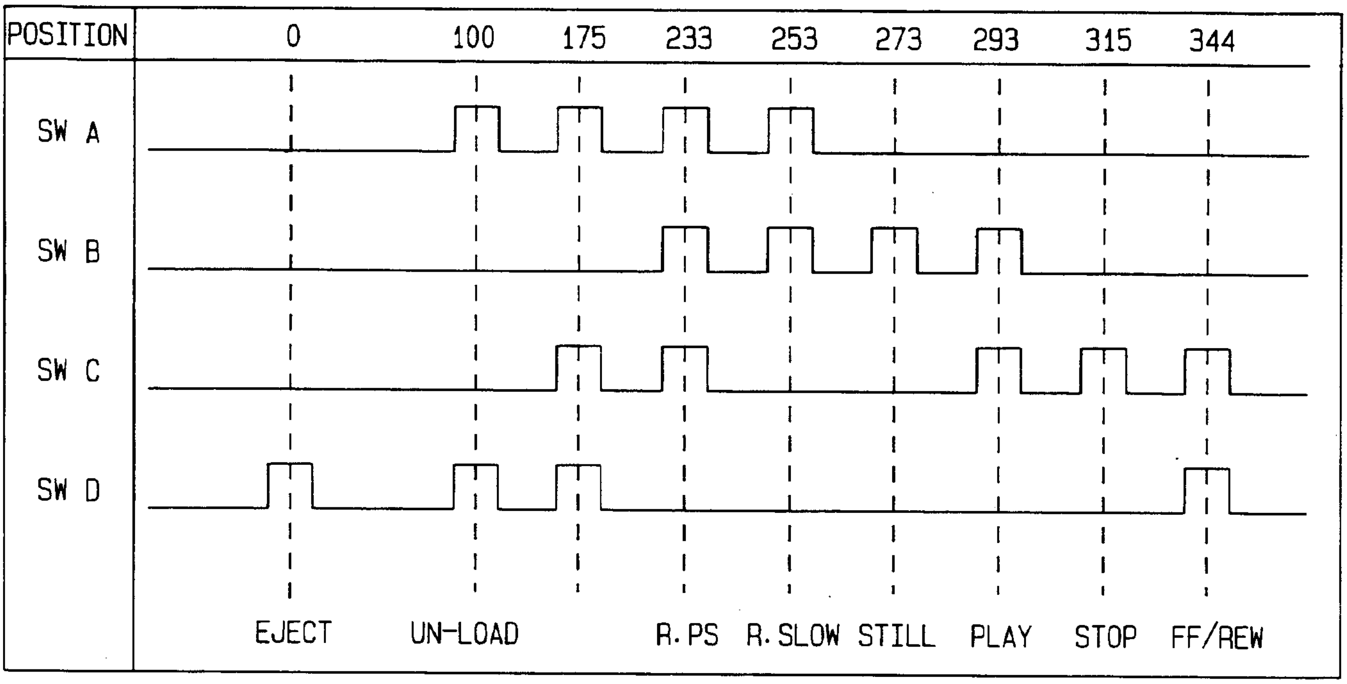
5-1-2. System and Timer Control Peripheral Circuit Interface (IC601 on Main Board)

PIN NO.	SIGNAL NAME	I/O	FUNCTION AND I/O LEVEL
1	S4	O	Digitron anode direct drive port
2	S3	O	Digitron anode direct drive port
3	S2	O	Digitron anode direct drive port
4	S1	O	Digitron anode direct drive port
5	CTL-P C/D	I	Input port of count down control pulse
6	KEY 1	I	Key matrix input signal
7	KEY 2	I	Key matrix input signal
8	KEY 3	I	Key matrix input signal
9	H'D SW	I	Input port of head switching pulse.
10	ENV DET	I	Video envelope wave input port for head amp switching
11	C.FG C/D	I	Input port of capstan FG count down pulse
12	PWR DET	I	Input port for power detection of system controller
13	OUT PUT EXP	O	Strobe signal to output expander
14	H'D AMP SW	O	Output port for head amp switching
15	SERVO CLK	O	Serial clock to servo
16	SERVO DATA	O	Serial data to servo
17	C.M CTL	O	Output port for capstan motor control
18	STEP/SLOW	O	Output port for slow mode control
19	DM C1	O	Drum motor control port in slow mode
20	DM C2	O	Drum motor control port in slow mode
21	INDEX	I	Input port of index signal detection
22	VPS DATA IN	I	Input port of VPS data
23	ATR ENVE	I	Input port envelope wave for auto tracking
24	VPS CLOCK	O	Serial clock to VPS
25	SYNC DET	I	Video signal detection "H" when video signal

PIN NO.	SIGNAL NAME	I/O	FUNCTION AND I/O LEVEL
26	AFT	I	Input port for automatic fine tunning from tuner block
27	COM DATA IN	I	Serial data input port from NVRAM and Deck Joint
28	REMOCON IN	I	Remote control input port
29	TUNER PWM	O	Output port for Tuner PWM (Pulse Width Modulation)
30	X1	O	Crystal ceramic connect port for system clock OSC
31	X2	I	Crystal ceramic connect port for system clock OSC
32	GND		Ground
33	XT2	O	32.768KHz crystal connect port
34	XT1	I	32.768KHz crystal connect port
35	IN EXP STB	O	Strobe signal to Deck
36	ROTARY	O	Output port for rotary switching
37	COM DATA OUT	O	Serial data output port NVRAM, OUTPUT EXP
38	COM CLK	O	Serial clock output port
39	RESET	I	Reset input port (Normally : H, Reset : L)
40	G1	O	Digitron grid direct drive port
41	G2	O	Digitron grid direct drive port
42	G3	O	Digitron grid direct drive port
43	G4	O	Digitron grid direct drive port
44	G5	O	Digitron grid direct drive port
45	G6	O	Digitron grid direct drive port
46	G7	O	Digitron grid direct drive port
47	G8	O	Digitron grid direct drive port
48	G9	O	Digitron grid direct drive port
49	G10	O	Digitron grid direct drive port
50	G11	O	Digitron grid direct drive port
51	G12	O	Digitron grid direct drive port

PIN NO.	SIGNAL NAME	I/O	FUNCTION AND I/O LEVEL
52	G13	O	Digitron grid direct drive port
53	CM F/R	O	Output port for capstan motor rotation (FORWARD : "L")
54	NVRAM STB	O	Strobe signal to NVRAM
55	OSD STB	O	Strobe signal to OSD
56	V LOAD	I	Digitron drive voltage input port
57	V PRE	I	Ground
58	S10	O	Digitron grid direct drive port
59	S9	O	Digitron grid direct drive port
60	S8	O	Digitron grid direct drive port
61	S7	O	Digitron grid direct drive port
62	S6	O	Digitron grid direct drive port
63	S5	O	Digitron grid direct drive port
64	VDD	I	MICOM drive voltage

5-2. PROGRAM SWITCH TIMING CHART



POSITION	CAM	SW			MODE
	A	B	C	D	
EJECT	0	0	0	1	EJECT
UN-LOAD	1	0	0	1	UN-LOAD
R.PS	1	1	1	0	R.PS, Z-R.PS
R.SLOW	1	1	0	0	R.SLOW
STILL	0	1	0	0	STILL, SLOW, F/ADV
PLAY	0	1	1	0	T-STOP, PLAY, REC, REC_PAUSE, F.PS, Z-F.PS
STOP	0	0	1	0	STOP, POWER OFF (CASS-IN)
FF/REW	0	0	1	1	FF, REW

6. REPLACEMENT PARTS LIST

6-1. GENERAL INFORMATION

1. Parts Replacement

> *Many electrical mechanical parts in Video Cassette Recorder (Player) have special safety-related characteristics. These characteristics are often not evident from visual inspection, nor can the protection they give necessarily be obtained by replacing them with components rated for higher voltage, wattage, etc.*
> *Replaement parts which have these special safety characteristics are identified in this manual ; electrical components having such features are identified by ⚠ in the replacement parts lists and schematic diagrams.*
> *The use of a replacement part which does not have the same safety characteristics as the factory recommended replacement parts shown in this service manual may create shock, fire or other hazards.*

2. Unless otherwise specified :

1) All resistors are in ohms (Ω)

- **K** = 1,000
- **M** = 1,000K

* **RD** : 1/8W, ± 5% Carbon
* **RM** : 1/4W, ± 5% Metal-film

2) All capacitors are in ± 10%, MF = µF.

* CC : PF = uuF, Ceramic, Temp
* CK : PK = uuF, Ceramic, MK
* CS : Tantalium
* CQ : Polyester
* CE : Electrolytic

3) All coils are in microhenry (uH)

- **1mH** = 1,000uH

3. ASS'Y = Assembly

4. P.W.B = Printed Wiring Board.

5. ⚠ Mark : Safety related parts.

6. How to order replacement parts

To have your order filed promptly and correctly, please furnish the following informations.

1) Mode Number
2) Location Number
3) Part Number
4) Description & Specification

7. P.W.B Assembly is not replacement item.

6-2. ELECTRICAL REPLACEMENT PARTS LIST

LOCA.NO	PART-NUMBER	DESCRIPTION;SPECIFICATION
660	69098-225-500	REGULATOR ASSY;X3 230V CP2
	63053-811-221	POWER CORD ASSY;KLCE-2F CP-2
BD01	62169-403-562	DIODE-STACK;RBV402/D3SBA20
BD02	62169-403-562	DIODE-STACK;RBV402/D3SBA20
C01	61409-601-320	C-CERAMIC;ECK-DNS 472ME
C02	61639-506-332	C-ELEC;CEAP 35V 3300M SG(18X36.5)
C03	61417-109-210	C-CERAMIC.HK;CK45F TAPG 50V 104-Z
C04	61637-205-470	C-ELEC;CEAP 25V 47M SA(6X11)
C05	61639-506-332	C-ELEC;CEAP 35V 3300M SG(18X36.5)
C06	A1104-0415	C-ELEC;CE 04 W 16V 472-M 16X28
C08	61639-904-332	C-ELEC;LC-1325-3300-16-M
CN100	63349-062-590	CONNECTOR-WAFER;5268-10A
D01	62169-406-482	DIODE;1N4148 SAMSUNG
D02	62169-403-789	DIODE-ZENER;MTZ5.6C TAPG
D03	B4104-0046	DIODE-RECT;1N4002GP 200V 1A
F01	64709-085-130	FUSE;T315mA 250V 218 LF
F02	64709-085-140	FUSE;T2A 250V 218 LF
F03	64709-085-040	FUSE;T1.6A 250V 218 5X20MM LT EUR
IC01	62119-113-012	IC;MC7815C
IC02	62119-401-313	IC;PQ12RF11
L01	62429-014-115	LINE-FILTER;HL38
PT1101	A1199-0024	POWER TRANS;EI 66X24 230V 50HZ
Q01	62139-301-308	TRANSISTOR;2SD 1944/2SD1273
R01	61048-327-271	R-METAL FILM;RS 1/2P 270-J TAPG

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	V9099-613-175	ASSY-REMOCON;LCD (VR4633)
	V7643-608-010	DOOR-BATTERY;ABS 94HB PR1350
CT01	61617-408-229	C-ELEC;CEAP 50V 2.2M RSS(4X7)
CT02	61637-204-470	C-ELEC;CEAP 16V 47M SA(5X11)
CT03	61417-109-210	C-CERAMIC.HK;CK45F TAPG 50V 104-Z
CT04	61417-109-210	C-CERAMIC.HK;CK45F TAPG 50V 104-Z
CT05	61417-109-210	C-CERAMIC.HK;CK45F TAPG 50V 104-Z
CT06	61407-105-850	C-CERAMIC.TEMP;CC45 CH TAPG 50V 8-D
CT07	61417-109-210	C-CERAMIC.HK;CK45F TAPG 50V 104-Z
DT04	62169-406-482	DIODE;1N4148 SAMSUNG
ICT01	62119-103-723	IC;LC5864H-1277
ICT02	62119-401-385	IC;74HC08 SMT TYPE
LCD1	62309-109-030	LCD;CG434-TS
LT01	62309-112-010	LED IR;CL-IL1(F)
LT01	62309-112-010	LED IR;CL-IL1(F)
QT01	62137-702-020	TRANSISTOR;KSC 1008-Y TAPG
RT01	61048-177-271	R-METAL FILM;RM 1/8TS 270-J
RT02	61048-177-109	R-METAL FILM;RM 1/8TS 1-J
RT03	61048-177-303	R-METAL FILM;RM 1/8TS 30K-J
XT01	64539-012-528	CRYSTAL;38.2294KHZ

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LOCA.NO	PART-NUMBER	DESCRIPTION;SPECIFICATION
	V9099-613-174	ASSY-REMOCON;W/O LCD (VR4632)
	V9099-613-173	ASSY-REMOCON;W/O LCD (VR4631)
	V7643-608-010	DOOR-BATTERY;ABS 94HB PR1350
CT01	61647-804-479	C-ELEC;CEAP 16V 4.7M SE(2.5)
CT02	61407-117-104	C-CERAMIC.AXIAL;CAX Y TAPG 16V 0.01-N
CT03	61407-101-360	C-CERAMIC.TEMP;CC45 SL TAPG 50V 100-J
CT04	61407-101-360	C-CERAMIC.TEMP;CC45 SL TAPG 50V 100-J
DT01	62169-406-482	DIODE;1N4148 SAMSUNG
DT02	62169-406-482	DIODE;1N4148 SAMSUNG
DT03	62169-406-482	DIODE;1N4148 SAMSUNG
DT04	62169-406-482	DIODE;1N4148 SAMSUNG
DT05	62169-406-482	DIODE;1N4148 SAMSUNG
DT06	62169-406-482	DIODE;1N4148 SAMSUNG
DT07	62169-406-482	DIODE;1N4148 SAMSUNG
DT08	62169-406-482	DIODE;1N4148 SAMSUNG
ICT01	62119-401-327	IC;KS51900
LT01	62309-112-036	LED-IR;CL2
QT01	62137-702-020	TRANSISTOR;KSC 1008-Y TAPG
RT01	61048-177-564	R-METAL FILM;RM 1/8TS 560K-J
XT01	64539-102-311	CERAMIC RESONATOR;CSB455EBL/KBR455BKTL

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670	69371-302-252	ASSY F/TIMER; (VR4633)
	69371-302-208	ASSY F/TIMER; (VR4632)
	69371-302-224	ASSY F/TIMER; (VR4631)
C701	61637-204-470	C-ELEC;CEAP 16V 47M SA(5X11)
C702	61407-117-104	C-CERAMIC.AXIAL;CAX Y TAPG 16V 0.01-N
C703	61407-117-102	C-CERAMIC.AXIAL;CAX B TAPG 102-K
C704	61407-105-320	C-CERAMIC.TEMP;CC45 CH TAPG 50V 82-J
C705	61407-117-102	C-CERAMIC.AXIAL;CAX B TAPG 102-K
CN701	B6010-0159	CONNECTOR-WAFER;5082-3110-20
CN702	B6010-0159	CONNECTOR-WAFER;5082-3110-20
CN703	63348-232-110	CONNECTOR-WAFER;52147-1110
CN704	63054-611-030	FLAT-CABLE;2760 #26 2.0C-11P-30m/m
CN705	63053-403-443	LEAD CONNECTOR ASSY;1533 #26 5395-5264 3P
D701	62169-406-482	DIODE;1N4148 SAMSUNG
D702	62169-406-482	DIODE;1N4148 SAMSUNG
D703	62169-406-482	DIODE;1N4148 SAMSUNG
D704	62169-406-482	DIODE;1N4148 SAMSUNG
D705	62169-406-482	DIODE;1N4148 SAMSUNG
D706	62169-406-482	DIODE;1N4148 SAMSUNG
D707	62169-406-482	DIODE;1N4148 SAMSUNG
D714	62169-406-482	DIODE;1N4148 SAMSUNG
D716	62169-406-482	DIODE;1N4148 SAMSUNG
DT701	A4153-0009	VF-DISPLAY;SVV-13SS01
J701	A3040-0004	JACK PIN;DSP-8805-03(YEL)
J702	A3040-0003	JACK PIN;DSP-8805-03(WHT)
PCB	66029-0275-00	P.C.B-F/TIMER;1V0 T1.6 W247 L213 VX-3561
Q701	62137-701-013	TRANSISTOR;KSR 1004 TAPG
Q702	62137-701-020	TRANSISTOR;KSR 2001 TAPG
R701	61048-177-154	R-METAL FILM;RM 1/8TS 150K-J
R702	61048-177-154	R-METAL FILM;RM 1/8TS 150K-J
R703	61048-177-154	R-METAL FILM;RM 1/8TS 150K-J
R705	61048-177-102	R-METAL FILM;RM 1/8TS 1K-J
R709	61048-177-102	R-METAL FILM;RM 1/8TS 1K-J
R710	61048-177-393	R-METAL FILM;RM 1/8TS 39K-J
RM701	64529-312-041	REMOCON-MODULE;SBX1610-82
SW701	63599-016-070	SW-TACT;EVQ-QS2 05K
SW702	63599-016-070	SW-TACT;EVQ-QS2 05K
SW703	63599-016-070	SW-TACT;EVQ-QS2 05K
SW704	63599-016-070	SW-TACT;EVQ-QS2 05K
SW705	63599-016-070	SW-TACT;EVQ-QS2 05K
SW706	63599-016-070	SW-TACT;EVQ-QS2 05K
SW707	63599-016-070	SW-TACT;EVQ-QS2 05K
SW708	63599-016-070	SW-TACT;EVQ-QS2 05K
SW709	63599-016-070	SW-TACT;EVQ-QS2 05K
SW710	63599-016-070	SW-TACT;EVQ-QS2 05K
SW711	63599-016-070	SW-TACT;EVQ-QS2 05K
SW712	63599-016-070	SW-TACT;EVQ-QS2 05K
SW713	63599-016-070	SW-TACT;EVQ-QS2 05K
SW714	63599-016-070	SW-TACT;EVQ-QS2 05K
SW715	63599-016-070	SW-TACT;EVQ-QS2 05K
SW716	63599-016-070	SW-TACT;EVQ-QS2 05K
SW717	63599-016-070	SW-TACT;EVQ-QS2 05K
VR701	61203-107-110	VR ROUND;RK09K1130/RH0102SQ 20KB

LOCA.NO	PART-NUMBER	DESCRIPTION,SPECIFICATION
600		ASSY MAIN

POWER PARTS

LOCA.NO	PART-NUMBER	DESCRIPTION,SPECIFICATION
C108	61637-205-470	C-ELEC;CEAP 25V 47M SA(6X11)
C110	61637-511-470	C-ELEC;CEAP 100V 47M SG(10X12.5)
C111	61637-511-470	C-ELEC;CEAP 100V 47M SG(10X12.5)
C113	61637-208-220	C-ELEC;CEAP 50V 22M SA(6X11)
C114	61637-208-010	C-ELEC;CEAP 50V 1M SA(5X11)
C116	61637-504-101	C-ELEC;CEAP 16V 100M SG(6.3X11)
C117	61454-239-103	M-CHIP CAP;RL EX 050 Y 103N
C118	61637-205-470	C-ELEC;CEAP 25V 47M SA(6X11)
C119	61454-239-103	M-CHIP CAP;RL EX 050 Y 103N
C120	61637-205-470	C-ELEC;CEAP 25V 47M SA(6X11)
C121	61454-240-227	M-CHIP CAP;RL UX 050 B 0.022-Z
CN101	63053-110-135	LEAD CONNECTOR ASSY;1061 #26 5264 5295-10
D105	B4104-0046	DIODE-RECT;1N4002GP 200V 1A
D106	B4104-0046	DIODE-RECT;1N4002GP 200V 1A
D107	62169-406-482	DIODE;1N4148 SAMSUNG
D108	B4104-0046	DIODE-RECT;1N4002GP 200V 1A
D109	B4104-0046	DIODE-RECT;1N4002GP 200V 1A
D110	B4104-0046	DIODE-RECT;1N4002GP 200V 1A
IC101	62119-501-561	IC-L;KA33V TAPG
Q101	62137-302-441	TRANSISTOR;KSC 2328-Y TAPG
Q102	62147-401-835	TRANSISTOR;KSA 928A-Y TAPG
Q103	62137-701-010	TRANSISTOR;KSR 1001 TAPG
Q104	62147-101-950	TRANSISTOR;KSA 643-Y TAPG
Q105	62137-701-011	TRANSISTOR;KSR 1002 TAPG
Q106	62137-701-022	TRANSISTOR;KSR 2003 TAPG
Q107	62137-701-012	TRANSISTOR;KSR 1003 TAPG
Q108	62137-701-012	TRANSISTOR;KSR 1003 TAPG
Q109	62137-701-022	TRANSISTOR;KSR 2003 TAPG
R101	61079-919-561	M-CHIP RES G;QR RD 2A 2BY 560-J
R102	61048-177-222	R-METAL FILM;RM 1/8TS 2.2K-J
R103	61079-919-473	M-CHIP RES G;QR RD 2A 2BY 47K-J
R104	61048-177-102	R-METAL FILM;RM 1/8TS 1K-J
R105	61079-919-303	M-CHIP RES G;QR RD 2A 2BY 30K-J
R106	61079-919-101	M-CHIP RES G;QR RD 2A 2BY 100-J
R107	61079-919-101	M-CHIP RES G;QR RD 2A 2BY 100-J
R108	61048-277-102	R-METAL FILM;RM 1/4T 1K-J
R110	61048-277-102	R-METAL FILM;RM 1/4T 1K-J
R112	61079-919-473	M-CHIP RES G;QR RD 2A 2BY 47K-J
R114	61048-277-821	R-METAL FILM;RM 1/4T 820-J
R115	61079-919-000	M-CHIP RES G;QR RD 2A 2BY 0A-J(JUMPER)
R116	61079-919-000	M-CHIP RES G;QR RD 2A 2BY 0A-J(JUMPER)
ZD101	62169-403-821	DIODE-ZENER;MTZ 5.1B
ZD102	62169-403-832	DIODE-ZENER;UZ 3.6B
ZD103	62169-403-838	DIODE-ZENER;MTZ27C

SYSTEM CONTROL PARTS

LOCA.NO	PART-NUMBER	DESCRIPTION,SPECIFICATION
C601	61454-239-120	M-CHIP CAP;RL UX 050 SL 12-J
C602	61454-239-240	M-CHIP CAP;RL UX 050 SL 24-J
C603	61407-117-104	C-CERAMIC.AXIAL;CAX Y TAPG 16V 0.01-N
C604	61637-205-470	C-ELEC;CEAP 25V 47M SA(6X11)
C605	61454-239-103	M-CHIP CAP;RL EX 050 Y 103N
C607	61637-504-101	C-ELEC;CEAP 16V 100M SG(6.3X11)
C608	61637-002-102	C-ELEC;CEAP 6.3V 1000M SMS (10X13)
C609	61637-208-010	C-ELEC;CEAP 50V 1M SA(5X11)
C610	61407-117-101	C-CERAMIC.AXIAL;UP050F 104Z
C612	61454-240-227	M-CHIP CAP;RL UX 050 B 0.022-Z
C613	61637-504-101	C-ELEC;CEAP 16V 100M SG(6.3X11)
C614	61637-205-470	C-ELEC;CEAP 25V 47M SA(6X11)
C615	61454-240-227	M-CHIP CAP;RL UX 050 B 0.022-Z
C616	61637-208-010	C-ELEC;CEAP 50V 1M SA(5X11)
C617	61507-121-481	C-POLTESTER;CQ921M TAPG 50V 153-J
C618	61507-121-450	C-POLYESTER;CQ921M TAPG 50V 682-K
C619	61454-239-470	M-CHIP CAP;RL UX 050 SL 47-J
C620	61454-239-470	M-CHIP CAP;RL UX 050 SL 47-J
C621	61507-121-571	C-POLYESTER;CQ921M TAPG 100V 683-J
C622	61637-204-220	C-ELEC;CEAP 16V 22M SA
CN601	B6010-0211	CONNECTOR-WAFER;5082-3010-20 WHT
CN602	B6010-0211	CONNECTOR-WAFER;5082-3010-20 WHT
D601	62169-406-482	DIODE;1N4148 SAMSUNG
D602	62169-406-482	DIODE;1N4148 SAMSUNG
D603	62169-406-482	DIODE;1N4148 SAMSUNG
D604	62169-406-482	DIODE;1N4148 SAMSUNG
IC601	67199-0115-00	MICOM;UPD75216ACW-W20 V2 DIP
IC602	62119-401-314	IC;KIA7033P
IC603	62119-401-186	IC;KM93C46
IC604	62119-401-300	IC;KA8301(N.M)
IC605	62119-101-770	IC;TC4094BP/CD4094BCN
IC606	62119-101-770	IC;TC4094BP/CD4094BCN
IC607	62119-401-872	IC;LM393(N.M)
IC608	62119-401-314	IC;KIA7033P
L601	62427-812-109	COIL-PEAKING;EL0606RA 1uH-K
L602	62429-833-101	COIL-PEAKING AXIAL;BAL04ST 101K
Q602	62137-701-013	TRANSISTOR;KSR 1004 TAPG
Q603	62137-103-380	TRANSISTOR;KSA 733-Y TAPG
Q604	62137-701-013	TRANSISTOR;KSR 1004 TAPG
Q605	62137-302-740	TRANSISTOR;KSC 945-Y TAPG
R601	61079-919-103	M-CHIP RES G;QR RD 2A 2BY 10K-J
R602	61079-919-102	M-CHIP RES G;QR RD 2A 2BY 1K-J
R603	61079-919-102	M-CHIP RES G;QR RD 2A 2BY 1K-J
R604	61079-919-102	M-CHIP RES G;QR RD 2A 2BY 1K-J
R605	61048-177-102	R-METAL FILM;RM 1/8TS 1K-J
R606	61048-177-102	R-METAL FILM;RM 1/8TS 1K-J
R607	61048-177-102	R-METAL FILM;RM 1/8TS 1K-J
R608	61079-919-102	M-CHIP RES G;QR RD 2A 2BY 1K-J
R609	61048-177-102	R-METAL FILM;RM 1/8TS 1K-J
R610	61079-919-104	M-CHIP RES G;QR RD 2A 2BY 100K-J
R611	61079-919-103	M-CHIP RES G;QR RD 2A 2BY 10K-J
R612	61048-177-102	R-METAL FILM;RM 1/8TS 1K-J
R613	61079-919-102	M-CHIP RES G;QR RD 2A 2BY 1K-J
R614	61079-919-102	M-CHIP RES G;QR RD 2A 2BY 1K-J
R615	61048-177-102	R-METAL FILM;RM 1/8TS 1K-J
R616	61048-177-102	R-METAL FILM;RM 1/8TS 1K-J
R617	61048-177-102	R-METAL FILM;RM 1/8TS 1K-J
R618	61048-177-102	R-METAL FILM;RM 1/8TS 1K-J
R619	61048-177-473	R-METAL FILM;RM 1/8TS 47K-J
R620	61079-919-334	M-CHIP RES G;QR RD 2A 2BY 330K-J
R621	61048-177-102	R-METAL FILM;RM 1/8TS 1K-J
R622	61048-177-102	R-METAL FILM;RM 1/8TS 1K-J
R623	61079-919-102	M-CHIP RES G;QR RD 2A 2BY 1K-J
R624	61079-919-102	M-CHIP RES G;QR RD 2A 2BY 1K-J
R625	61048-177-223	R-METAL FILM;RM 1/8TS 22K-J
R628	61079-919-182	M-CHIP RES G;QR RD 2A 2BY 1.8K-J
R629	61048-177-102	R-METAL FILM;RM 1/8TS 1K-J
R631	61048-177-511	R-METAL FILM;RM 1/8TS 510-J
R633	61048-177-683	R-METAL FILM;RM 1/8TS 68K-J
R634	61048-177-330	R-METAL FILM;RM 1/8TS 33-J
R635	61079-919-473	M-CHIP RES G;QR RD 2A 2BY 47K-J
R636	61079-919-102	M-CHIP RES G;QR RD 2A 2BY 1K-J
R637	61079-919-102	M-CHIP RES G;QR RD 2A 2BY 1K-J
R638	61079-919-102	M-CHIP RES G;QR RD 2A 2BY 1K-J
R639	61048-177-682	R-METAL FILM;RM 1/8TS 6.8K-J
R640	61048-177-472	R-METAL FILM;RM 1/8TS 4.7K-J
R641	61048-177-472	R-METAL FILM;RM 1/8TS 4.7K-J
R642	61049-429-338	R-METAL OXIDE;RS 2P 3.3J
R643	61048-177-122	R-METAL FILM;RM 1/8TS 1.2K-J
R644	61048-177-513	R-METAL FILM;RM 1/8TS 51K-J
R645	61048-177-102	R-METAL FILM;RM 1/8TS 1K-J
R646	61079-919-104	M-CHIP RES G;QR RD 2A 2BY 100K-J
R647	61079-919-104	M-CHIP RES G;QR RD 2A 2BY 100K-J
R648	61079-919-622	M-CHIP RES G;QR RD 2A 2BY 6.2K-J
R649	61079-919-103	M-CHIP RES G;QR RD 2A 2BY 10K-J
R661	61079-919-000	M-CHIP RES G;QR RD 2A 2BY 0A-J(JUMPER)
R663	61048-177-332	R-METAL FILM;RM 1/8TS 3.3K-J
R664	61048-177-332	R-METAL FILM;RM 1/8TS 3.3K-J
R665	61048-177-332	R-METAL FILM;RM 1/8TS 3.3K-J
R666	61048-177-102	R-METAL FILM;RM 1/8TS 1K-J
R669	61048-177-102	R-METAL FILM;RM 1/8TS 1K-J
R670	61048-177-102	R-METAL FILM;RM 1/8TS 1K-J
R671	61048-177-102	R-METAL FILM;RM 1/8TS 1K-J
R672	61079-919-000	M-CHIP RES G;QR RD 2A 2BY 0A-J(JUMPER)
R673	61079-919-222	M-CHIP RES G;QR RD 2A 2BY 2.2K-J

LOCA.NO	PART-NUMBER	DESCRIPTION;SPECIFICATION
R674	61079-919-000	M-CHIP RES G;QR RD 2A 2BY 0A-J(JUMPER)
R675	61048-177-472	R-METAL FILM;RM 1/8TS 4.7K-J
R676	61079-919-000	M-CHIP RES G;QR RD 2A 2BY 0A-J(JUMPER)
W645	61048-177-333	R-METAL FILM;RM 1/8TS 33K-J
XT601	64539-102-044	CERAMIC-RESONATOR;FCR 4.19MC
XT602	64539-021-010	CRYSTAL;P-3(32.768KHZ)

SERVO PARTS - 1 (IC201;HD49748NT)

LOCA.NO	PART-NUMBER	DESCRIPTION;SPECIFICATION
C201	61454-239-107	M-CHIP CAP;RL UX 050 B 0.001-K
C202	61637-206-100	C-ELEC;CEAP 35V 10M SA(5X11)
C203	61454-239-107	M-CHIP CAP;RL UX 050 B 0.001-K
C206	61637-208-010	C-ELEC;CEAP 50V 1M SA(5X11)
C207	61637-206-100	C-ELEC;CEAP 35V 10M SA(5X11)
C208	61507-121-550	C-POLYESTER;CQ921M TAPG 50V 473-K
C209	61637-206-100	C-ELEC;CEAP 35V 10M SA(5X11)
C210	61637-208-010	C-ELEC;CEAP 50V 1M SA(5X11)
C211	61507-121-550	C-POLYESTER;CQ921M TAPG 50V 473-K
C212	61637-206-100	C-ELEC;CEAP 35V/10M SA(5X11)
C213	61637-206-100	C-ELEC;CEAP 35V/10M SA(5X11)
C214	61637-206-100	C-ELEC;CEAP 35V 10M SA(5X11)
C215	61507-121-340	C-POLYESTER;CQ921M TAPG 100V 102-K
C216	A1102-0149	C-FILM;CF 922 P 100V T 224-J /C-M 365 26224/3E
C217	61454-239-103	M-CHIP CAP;RL EX 050 Y 103N
C218	61637-205-470	C-ELEC;CEAP 25V 47M SA(6X11)
C219	61407-117-104	C-CERAMIC.AXIAL;CAX Y TAPG 16V 0.01-N
C220	61637-206-100	C-ELEC;CEAP 35V 10M SA(5X11)
C221	61507-121-510	C-POLYESTER;CQ921M TAPG 100V 223-K
C222	61617-408-479	C-ELEC;CEAP 50V 4.7M RSS(4X7)
C223	A1102-0148	C-FILM;CF 922 P 100V T 104-J /C-M 365 26104/3E
C224	61454-239-181	M-CHIP CAP;RL UX 050 B 181-K
C225	61637-204-220	C-ELEC;CEAP 16V 22M SA
C226	61637-204-220	C-ELEC;CEAP 16V 22M SA
C227	61454-239-107	M-CHIP CAP;RL UX 050 B 0.001-K
C233	61417-109-040	C-CERAMIC.HK;CK45F TAPG 50V 102-Z
C234	61417-109-040	C-CERAMIC.HK;CK45F TAPG 50V 102-Z
C235	61637-208-010	C-ELEC;CEAP 50V 1M SA(5X11)
C238	61454-240-227	M-CHIP CAP;RL UX 050 B 0.022-Z
C239	61637-504-101	C-ELEC;CEAP 16V 100M SG(6.3X11)
C240	61454-239-107	M-CHIP CAP;RL UX 050 B 0.001-K
CN201	63348-231-220	CONNECTOR WAFER;52045-2210
D201	62169-406-482	DIODE;1N4148 SAMSUNG
D202	62169-406-482	DIODE;1N4148 SAMSUNG
D204	62169-406-482	DIODE;1N4148 SAMSUNG
D205	62169-406-482	DIODE;1N4148 SAMSUNG
D206	62169-406-482	DIODE;1N4148 SAMSUNG
IC201	62119-401-862	IC;HD49748NT
IC202	62119-501-572	IC-LINEAR;LM358S(N.M)
L201	62427-812-101	COIL-PEAKING;EL0606RA 100uH-J
L202	62427-812-101	COIL-PEAKING;EL0606RA 100uH-J
Q205	62137-701-012	TRANSISTOR;KSR 1003 TAPG
R201	61079-919-563	M-CHIP RES G;QR RD 2A 2BY 56K-J
R202	61079-919-823	M-CHIP RES G;QR RD 2A 2BY 82K-J
R203	61079-919-104	M-CHIP RES G;QR RD 2A 2BY 100K-J
R204	61079-919-104	M-CHIP RES G;QR RD 2A 2BY 100K-J
R206	61048-177-272	R-METAL FILM;RM 1/8TS 2.7K-J
R208	61079-919-512	M-CHIP RES G;QR RD 2A 2BY 5.1K-J
R209	61048-177-102	R-METAL FILM;RM 1/8TS 1K-J
R212	61048-177-103	R-METAL FILM;RM 1/8TS 10K-J
R213	61048-177-122	R-METAL FILM;RM 1/8TS 1.2K-J
R214	61079-919-103	M-CHIP RES G;QR RD 2A 2BY 10K-J
R215	61048-177-473	R-METAL FILM;RM 1/8TS 47K-J
R216	61079-919-562	M-CHIP RES G;QR RD 2A 2BY 5.6K-J
R217	61079-919-224	M-CHIP RES G;QR RD 2A 2BY 220K-J
R218	61079-919-105	M-CHIP RES G;QR RD 2A 2BY 1M-J
R219	61048-177-912	R-METAL FILM;RM 1/8TS 9.1K
R220	61048-177-334	R-METAL FILM;RM 1/8TS 330K-J
R221	61079-919-105	M-CHIP RES G;QR RD 2A 2BY 1M-J
R222	61079-919-683	M-CHIP RES G;QR RD 2A 2BY 68K-J
R223	61079-919-302	M-CHIP RES G;QR RD 2A 2BY 3K-J
R224	61079-919-393	M-CHIP RES G;QR RD 2A 2BY 39K-J
R225	61079-919-105	M-CHIP RES G;QR RD 2A 2BY 1M-J
R226	61079-919-564	M-CHIP RES G;QR RD 2A 2BY 560K-J

LOCA.NO	PART-NUMBER	DESCRIPTION;SPECIFICATION
R227	61048-177-562	R-METAL FILM;RM 1/8TS 5.6K-J
R228	61079-919-473	M-CHIP RES G;QR RD 2A 2BY 47K-J
R229	61079-919-105	M-CHIP RES G;QR RD 2A 2BY 1M-J
R230	61079-919-183	M-CHIP RES G;QR RD 2A 2BY 18K-J
R231	61079-919-823	M-CHIP RES G;QR RD 2A 2BY 82K-J
R232	61079-919-154	M-CHIP RES G;QR RD 2A 2BY 150K-J
R233	61079-919-474	M-CHIP RES G;QR RD 2A 2BY 470K-J
R234	61079-919-224	M-CHIP RES G;QR RD 2A 2BY 220K-J
R235	61079-919-124	M-CHIP RES G;QR RD 2A 2BY 120K-J
R236	61048-177-822	R-METAL FILM;RM 1/8TS 8.2K-J
R237	61048-177-102	R-METAL FILM;RM 1/8TS 1K-J
R238	61079-919-103	M-CHIP RES G;QR RD 2A 2BY 10K-J
R239	61048-177-473	R-METAL FILM;RM 1/8TS 47K-J
R240	61048-177-473	R-METAL FILM;RM 1/8TS 47K-J
R241	61079-919-102	M-CHIP RES G;QR RD 2A 2BY 1K-J
R242	61079-919-102	M-CHIP RES G;QR RD 2A 2BY 1K-J
R249	61079-919-104	M-CHIP RES G;QR RD 2A 2BY 100K-J
R250	61048-177-472	R-METAL FILM;RM 1/8TS 4.7K-J
R251	61079-919-105	M-CHIP RES G;QR RD 2A 2BY 1M-J
R252	61079-919-103	M-CHIP RES G;QR RD 2A 2BY 10K-J
R253	61079-919-102	M-CHIP RES G;QR RD 2A 2BY 1K-J
R254	61079-919-471	M-CHIP RES G;QR RD 2A 2BY 470-J
R255	61079-919-471	M-CHIP RES G;QR RD 2A 2BY 470-J
R258	61079-919-103	M-CHIP RES G;QR RD 2A 2BY 10K-J
R261	61079-919-103	M-CHIP RES G;QR RD 2A 2BY 10K-J
VR201	61247-101-104	VR-SEMI;EVN-DJA A03 B15 TAPG 100KB

SERVO PARTS - 2 (IC201;KA8319)

LOCA.NO	PART-NUMBER	DESCRIPTION;SPECIFICATION
C204	61647-808-228	C-ELEC;CEAP 50V 0.22M SE(2.5)
C208	61507-121-550	C-POLYESTER;CQ921M TAPG 50V 473-K
C209	61637-206-100	C-ELEC;CEAP 35V 10M SA(5X11)
C210	61637-208-010	C-ELEC;CEAP 50V 1M SA(5X11)
C211	61507-121-550	C-POLYESTER;CQ921M TAPG 50V 473-K
C212	61617-408-479	C-ELEC;CEAP 50V 4.7M RSS(4X7)
C213	61617-408-479	C-ELEC;CEAP 50V 4.7M RSS(4X7)
C214	61637-206-100	C-ELEC;CEAP 35V 10M SA(5X11)
C215	61507-121-340	C-POLYESTER;CQ921M TAPG 100V 102-K
C216	A1102-0149	C-FILM;CF 922 P 100V T 224-J /C-M 365 26224/3E
C217	61454-239-103	M-CHIP CAP;RL EX 050 Y 103N
C218	61637-205-470	C-ELEC;CEAP 25V 47M SA(6X11)
C219	61407-117-104	C-CERAMIC.AXIAL;CAX Y TAPG 16V 0.01-N
C220	61637-206-100	C-ELEC;CEAP 35V 10M SA(5X11)
C221	61507-121-510	C-POLYESTER;CQ921M TAPG 100V 223-K
C222	61617-408-479	C-ELEC;CEAP 50V 4.7M RSS(4X7)
C223	A1102-0148	C-FILM;CF 922 P 100V T 104-J /C-M 365 26104/3E
C224	61454-239-181	M-CHIP CAP;RL UX 050 B 181-K
C225	61637-204-220	C-ELEC;CEAP 16V 22M SA
C226	61637-204-220	C-ELEC;CEAP 16V 22M SA
C227	61454-239-107	M-CHIP CAP;RL UX 050 B 0.001-K
C233	61417-109-040	C-CERAMIC.HK;CK45F TAPG 50V 102-Z
C234	61417-109-040	C-CERAMIC.HK;CK45F TAPG 50V 102-Z
C235	61637-208-010	C-ELEC;CEAP 50V 1M SA(5X11)
C236	61637-205-470	C-ELEC;CEAP 25V 47M SA(6X11)
C238	61454-240-227	M-CHIP CAP;RL UX 050 B 0.022-Z
C239	61637-504-101	C-ELEC;CEAP 16V 100M SG(6.3X11)
C240	61454-239-107	M-CHIP CAP;RL UX 050 B 0.001-K
C280	61407-105-320	C-CERAMIC.TEMP;CC45 CH TAPG 50V 82-J
C290	61407-105-320	C-CERAMIC.TEMP;CC45 CH TAPG 50V 82-J
CN201	63348-231-220	CONNECTOR WAFER;52045-2210
D201	62169-406-482	DIODE;1N4148 SAMSUNG
D202	62169-406-482	DIODE;1N4148 SAMSUNG
D204	62169-406-482	DIODE;1N4148 SAMSUNG
D205	62169-406-482	DIODE;1N4148 SAMSUNG
D206	62169-406-482	DIODE;1N4148 SAMSUNG
IC201	62119-401-312	IC;KA8319
L201	62427-812-101	COIL-PEAKING;EL0606RA 100uH-J
L202	62427-812-101	COIL-PEAKING;EL0606RA 100uH-J
Q205	62137-701-012	TRANSISTOR;KSR 1003 TAPG
R201	61079-919-000	M-CHIP RES G;QR RD 2A 2BY 0A-J(JUMPER)
R204	61079-919-000	M-CHIP RES G;QR RD 2A 2BY 0A-J(JUMPER)

LOCA.NO	PART-NUMBER	DESCRIPTION;SPECIFICATION
R206	61048-177-272	R-METAL FILM;RM 1/8TS 2.7K-J
R208	61079-919-562	M-CHIP RES G;QR RD 2A 2BY 5.6K-J
R209	61048-177-272	R-METAL FILM;RM 1/8TS 2.7K-J
R212	61048-177-103	R-METAL FILM;RM 1/8TS 10K-J
R213	61048-177-122	R-METAL FILM;RM 1/8TS 1.2K-J
R214	61079-919-103	M-CHIP RES G;QR RD 2A 2BY 10K-J
R215	61048-177-473	R-METAL FILM;RM 1/8TS 47K-J
R216	61079-919-562	M-CHIP RES G;QR RD 2A 2BY 5.6K-J
R217	61079-919-224	M-CHIP RES G;QR RD 2A 2BY 220K-J
R218	61079-919-105	M-CHIP RES G;QR RD 2A 2BY 1M-J
R219	61048-177-912	R-METAL FILM;RM 1/8TS 9.1K
R220	61048-177-334	R-METAL FILM;RM 1/8TS 330K-J
R221	61079-919-105	M-CHIP RES G;QR RD 2A 2BY 1M-J
R222	61079-919-683	M-CHIP RES G;QR RD 2A 2BY 68K-J
R223	61079-919-000	M-CHIP RES G;QR RD 2A 2BY 0A-J(JUMPER)
R224	61079-919-393	M-CHIP RES G;QR RD 2A 2BY 39K-J
R225	61079-919-105	M-CHIP RES G;QR RD 2A 2BY 1M-J
R226	61079-919-564	M-CHIP RES G;QR RD 2A 2BY 560K-J
R227	61048-177-562	R-METAL FILM;RM 1/8TS 5.6K-J
R228	61079-919-473	M-CHIP RES G;QR RD 2A 2BY 47K-J
R229	61079-919-105	M-CHIP RES G;QR RD 2A 2BY 1M-J
R230	61079-919-183	M-CHIP RES G;QR RD 2A 2BY 18K-J
R231	61079-919-823	M-CHIP RES G;QR RD 2A 2BY 82K-J
R232	61079-919-154	M-CHIP RES G;QR RD 2A 2BY 150K-J
R233	61079-919-474	M-CHIP RES G;QR RD 2A 2BY 470K-J
R234	61079-919-224	M-CHIP RES G;QR RD 2A 2BY 220K-J
R235	61079-919-124	M-CHIP RES G;QR RD 2A 2BY 120K-J
R236	61048-177-822	R-METAL FILM;RM 1/8TS 8.2K-J
R237	61048-177-224	R-METAL FILM;RM 1/8TS 220K-J
R238	61079-919-103	M-CHIP RES G;QR RD 2A 2BY 10K-J
R239	61048-177-473	R-METAL FILM;RM 1/8TS 47K-J
R240	61048-177-473	R-METAL FILM;RM 1/8TS 47K-J
R241	61079-919-102	M-CHIP RES G;QR RD 2A 2BY 1K-J
R242	61079-919-102	M-CHIP RES G;QR RD 2A 2BY 1K-J
R249	61079-919-104	M-CHIP RES G;QR RD 2A 2BY 100K-J
R250	61048-177-472	R-METAL FILM;RM 1/8TS 4.7K-J
R251	61079-919-105	M-CHIP RES G;QR RD 2A 2BY 1M-J
R252	61079-919-103	M-CHIP RES G;QR RD 2A 2BY 10K-J
R253	61079-919-102	M-CHIP RES G;QR RD 2A 2BY 1K-J
R254	61079-919-471	M-CHIP RES G;QR RD 2A 2BY 470-J
R255	61079-919-471	M-CHIP RES G;QR RD 2A 2BY 470-J
R258	61079-919-103	M-CHIP RES G;QR RD 2A 2BY 10K-J
R261	61079-919-103	M-CHIP RES G;QR RD 2A 2BY 10K-J
VR201	61247-101-104	VR-SEMI;EVN-DJA A03 B15 TAPG 100KB

VIDEO PARTS (4H'D ; VR4633)

LOCA.NO	PART-NUMBER	DESCRIPTION;SPECIFICATION
C3201	61637-208-010	C-ELEC;CEAP 50V 1M SA(5X11)
C3202	61617-408-479	C-ELEC;CEAP 50V 4.7M RSS(4X7)
C3203	61407-101-482	C-CERAMIC.TEMP;CC45 SL TAPG 50V 75-J
C3204	61454-240-227	M-CHIP CAP;RL UX 050 B 0.022-Z
C3205	61637-208-010	C-ELEC;CEAP 50V 1M SA(5X11)
C3206	61507-121-550	C-POLYESTER;CQ921M TAPG 50V 473-K
C3207	61454-240-227	M-CHIP CAP;RL UX 050 B 0.022-Z
C3208	61637-208-010	C-ELEC;CEAP 50V 1M SA(5X11)
C3209	61637-608-338	C-ELEC;CEAP 50V 0.33M SV(5X9)
C3210	61637-206-100	C-ELEC;CEAP 35V 10M SA(5X11)
C3211	61454-239-103	M-CHIP CAP;RL EX 050 Y 103N
C3212	61407-117-101	C-CERAMIC.AXIAL;UP050F 104Z
C3213	61637-206-100	C-ELEC;CEAP 35V 10M SA(5X11)
C3214	61454-239-100	M-CHIP CAP;RL UX 050 SL 10-J
C3215	61637-206-100	C-ELEC;CEAP 35V 10M SA(5X11)
C3216	61454-239-820	M-CHIP CAP;RL UX 050 B 82-K
C3217	61454-239-394	M-CHIP CAP;RL UX 050 B 390-K
C3218	61627-208-010	C-ELEC;CEAP 50V 1M NP(6X11)
C3219	61454-239-560	M-CHIP CAP;RL UX 050 SL 56-J
C3220	61454-239-820	M-CHIP CAP;RL UX 050 B 82-K
C3221	61454-239-101	M-CHIP CAP;RL UX 050 SL 100-J
C3222	61454-239-103	M-CHIP CAP;RL EX 050 Y 103N
C3223	61454-239-390	M-CHIP CAP;RL UX 050 SL 50V 39-J
C3224	61454-239-181	M-CHIP CAP;RL UX 050 B 181-K
C3225	61407-117-228	C-CERAMIC.AXIAL;CK OA F 25V 223Z/F 25V 203ZT
C3226	61454-240-227	M-CHIP CAP;RL UX 050 B 0.022-Z
C3227	61454-239-479	M-CHIP CAP;RL UX 050 SL 4R7-K
C3228	61407-117-228	C-CERAMIC.AXIAL;CK OA F 25V 223Z/F 25V 203ZT
C3229	61507-121-550	C-POLYESTER;CQ921M TAPG 50V 473-K
C3230	61637-208-339	C-ELEC;CEAP 50V 3.3M SA(5X11)
C3231	61637-208-010	C-ELEC;CEAP 50V 1M SA(5X11)
C3232	61507-121-571	C-POLYESTER;CQ921M TAPG 100V 683-J
C3234	61637-205-470	C-ELEC;CEAP 25V 47M SA(6X11)
C3235	61454-239-103	M-CHIP CAP;RL EX 050 Y 103N
C3236	61454-239-103	M-CHIP CAP;RL EX 050 Y 103N
C3237	61637-205-470	C-ELEC;CEAP 25V 47M SA(6X11)
C3238	61407-117-104	C-CERAMIC.AXIAL;CAX Y TAPG 16V 0.01-N
C3239	61637-206-100	C-ELEC;CEAP 35V 10M SA(5X11)
C3240	61454-239-103	M-CHIP CAP;RL EX 050 Y 103N
C3241	61637-206-100	C-ELEC;CEAP 35V 10M SA(5X11)
C3242	61454-239-820	M-CHIP CAP;RL UX 050 B 82-K
C3243	61454-240-227	M-CHIP CAP;RL UX 050 B 0.022-Z
C3247	61407-117-104	C-CERAMIC.AXIAL;CAX Y TAPG 16V 0.01-N
C3255	61407-117-104	C-CERAMIC.AXIAL;CAX Y TAPG 16V 0.01-N
C3256	61637-206-100	C-ELEC;CEAP 35V 10M SA(5X11)
C3257	61454-239-101	M-CHIP CAP;RL UX 050 SL 100-J
C3258	61454-239-330	M-CHIP CAP;RL UX 050 SL 33-J
C3299	61454-239-820	M-CHIP CAP;RL UX 050 B 82-K
C3501	61407-117-104	C-CERAMIC.AXIAL;CAX Y TAPG 16V 0.01-N
C3502	61637-204-330	C-ELEC;CEAP 16V 33M SA(5X11)
C3503	61637-205-470	C-ELEC;CEAP 25V 47M SA(6X11)
C3504	61454-239-103	M-CHIP CAP;RL EX 050 Y 103N
C3505	61637-204-330	C-ELEC;CEAP 16V 33M SA(5X11)
C3506	61407-117-104	C-CERAMIC.AXIAL;CAX Y TAPG 16V 0.01-N
CF3201	64569-006-011	DELAY LINE;MS-31PC-5K
CN3103	63053-213-130	LEAD CONNECTOR ASSY;1429 #26 5295-51004 13P
D3101	62169-406-482	DIODE;1N4148 SAMSUNG
D3201	62169-406-482	DIODE;1N4148 SAMSUNG
D3202	62169-406-482	DIODE;1N4148 SAMSUNG
D3203	62169-406-482	DIODE;1N4148 SAMSUNG
D3204	62169-406-482	DIODE;1N4148 SAMSUNG
D3501	62169-406-482	DIODE;1N4148 SAMSUNG
D3603	62169-406-482	DIODE;1N4148 SAMSUNG
FL3501	64527-310-010	FILTER CERAMIC;SFE4.5MB TAPG
IC3201	B4008-0894	IC;LA7397 DIP
IC3202	B4008-0432	IC;MSM 7403RS SIP
IC3501	A4008-0035	IC;BA7025L SIP
L3201	62429-833-101	COIL-PEAKING AXIAL;BAL04ST 101K
L3202	62427-812-680	COIL-PEAKING;EL0606RA 68uH-J
L3203	62427-812-339	COIL-PEAKING;EL0606RA 3.3uH-J
L3206	62427-812-330	COIL-PEAKING;EL0606RA 33uH-J
L3207	62427-812-150	COIL-PEAKING;EL0606RA 15uH-J
L3208	62429-833-101	COIL-PEAKING AXIAL;BAL04ST 101K
L3209	62429-833-101	COIL-PEAKING AXIAL;BAL04ST 101K
L3212	62427-812-820	COIL-PEAKING;EL0606RA 82uH-J
L3299	62427-812-100	COIL-PEAKING;EL0606RA 10uH-J
L3501	62429-833-101	COIL-PEAKING AXIAL;BAL04ST 101K
Q3201	62137-302-740	TRANSISTOR;KSC 945-Y TAPG
Q3202	62137-103-380	TRANSISTOR;KSA 733-Y TAPG
Q3203	62137-302-740	TRANSISTOR;KSC 945-Y TAPG
Q3204	62137-103-380	TRANSISTOR;KSA 733-Y TAPG
Q3205	62137-701-013	TRANSISTOR;KSR 1004 TAPG
Q3206	62137-103-380	TRANSISTOR;KSA 733-Y TAPG
Q3207	62137-302-740	TRANSISTOR;KSC 945-Y TAPG
Q3208	62137-701-013	TRANSISTOR;KSR 1004 TAPG
Q3209	62137-302-740	TRANSISTOR;KSC 945-Y TAPG
Q3210	62137-103-380	TRANSISTOR;KSA 733-Y TAPG
Q3211	62137-302-740	TRANSISTOR;KSC 945-Y TAPG
Q3212	62137-302-740	TRANSISTOR;KSC 945-Y TAPG
Q3214	62137-701-023	TRANSISTOR;KSR 2004 TAPG
Q3215	62137-701-013	TRANSISTOR;KSR 1004 TAPG
Q3216	62137-701-020	TRANSISTOR;KSR 2001 TAPG
Q3501	62137-302-740	TRANSISTOR;KSC 945-Y TAPG
Q3607	62137-302-740	TRANSISTOR;KSC 945-Y TAPG
R3201	61079-919-102	M-CHIP RES G;QR RD 2A 2BY 1K-J
R3202	61079-919-271	M-CHIP RES G;QR RD 2A 2BY 270-J

LOCA.NO	PART-NUMBER	DESCRIPTION,SPECIFICATION
R3203	61079-919-222	M-CHIP RES G;QR RD 2A 2BY 2.2K-J
R3204	61079-919-472	M-CHIP RES G;QR RD 2A 2BY 4.7K-J
R3206	61079-919-822	M-CHIP RES G;QR RD 2A 2BY 8.2K-J
R3207	61079-919-222	M-CHIP RES G;QR RD 2A 2BY 2.2K-J
R3208	61079-919-222	M-CHIP RES G;QR RD 2A 2BY 2.2K-J
R3209	61079-919-000	M-CHIP RES G;QR RD 2A 2BY 0A-J(JUMPER)
R3210	61079-919-272	M-CHIP RES G;QR RD 2A 2BY 2.7K-J
R3211	61079-919-621	M-CHIP RES G;QR RD 2A 2BY 620-J
R3212	61079-919-102	M-CHIP RES G;QR RD 2A 2BY 1K-J
R3213	61048-177-222	R-METAL FILM;RM 1/8TS 2.2K-J
R3214	61048-177-102	R-METAL FILM;RM 1/8TS 1K-J
R3215	61048-177-472	R-METAL FILM;RM 1/8TS 4.7K-J
R3216	61079-919-122	M-CHIP RES G;QR RD 2A 2BY 1.2K-J
R3217	61079-919-182	M-CHIP RES G;QR RD 2A 2BY 1.8K-J
R3218	61079-919-431	M-CHIP RES G;QR RD 2A 2BY 430-J
R3219	61048-177-332	R-METAL FILM;RM 1/8TS 3.3K-J
R3221	61079-919-102	M-CHIP RES G;QR RD 2A 2BY 1K-J
R3222	61079-919-271	M-CHIP RES G;QR RD 2A 2BY 270-J
R3223	61079-919-102	M-CHIP RES G;QR RD 2A 2BY 1K-J
R3224	61079-919-332	M-CHIP RES G;QR RD 2A 2BY 3.3K-J
R3225	61079-919-222	M-CHIP RES G;QR RD 2A 2BY 2.2K-J
R3226	61079-919-432	M-CHIP RES G;QR RD 2A 2BY 4.3K-J
R3227	61079-919-103	M-CHIP RES G;QR RD 2A 2BY 10K-J
R3228	61079-919-202	M-CHIP RES G;QR RD 2A 2BY 2K-J
R3230	61079-919-223	M-CHIP RES G;QR RD 2A 2BY 22K-J
R3231	61079-919-103	M-CHIP RES G;QR RD 2A 2BY 10K-J
R3232	61048-177-182	R-METAL FILM;RM 1/8TS 1.8K-J
R3234	61079-919-105	M-CHIP RES G;QR RD 2A 2BY 1M-J
R3236	61079-919-152	M-CHIP RES G;QR RD 2A 2BY 1.5K-J
R3239	61079-919-103	M-CHIP RES G;QR RD 2A 2BY 10K-J
R3240	61048-177-222	R-METAL FILM;RM 1/8TS 2.2K-J
R3241	61079-919-102	M-CHIP RES G;QR RD 2A 2BY 1K-J
R3242	61079-919-221	M-CHIP RES G;QR RD 2A 2BY 220-J
R3243	61079-919-823	M-CHIP RES G;QR RD 2A 2BY 82K-J
R3244	61048-177-273	R-METAL FILM;RM 1/8TS 27K-J
R3246	61079-919-333	M-CHIP RES G;QR RD 2A 2BY 33K-J
R3247	61079-919-333	M-CHIP RES G;QR RD 2A 2BY 33K-J
R3248	61079-919-102	M-CHIP RES G;QR RD 2A 2BY 1K-J
R3249	61079-919-122	M-CHIP RES G;QR RD 2A 2BY 1.2K-J
R3250	61079-919-102	M-CHIP RES G;QR RD 2A 2BY 1K-J
R3255	61079-919-000	M-CHIP RES G;QR RD 2A 2BY 0A-J(JUMPER)
R3260	61079-919-000	M-CHIP RES G;QR RD 2A 2BY 0A-J(JUMPER)
R3261	61079-919-000	M-CHIP RES G;QR RD 2A 2BY 0A-J(JUMPER)
R3263	61079-919-000	M-CHIP RES G;QR RD 2A 2BY 0A-J(JUMPER)
R3264	61079-919-000	M-CHIP RES G;QR RD 2A 2BY 0A-J(JUMPER)
R3268	61079-919-000	M-CHIP RES G;QR RD 2A 2BY 0A-J(JUMPER)
R3269	61079-919-000	M-CHIP RES G;QR RD 2A 2BY 0A-J(JUMPER)
R3270	61079-919-000	M-CHIP RES G;QR RD 2A 2BY 0A-J(JUMPER)
R3272	61079-919-000	M-CHIP RES G;QR RD 2A 2BY 0A-J(JUMPER)
R3273	61079-919-223	M-CHIP RES G;QR RD 2A 2BY 22K-J
R3274	61079-919-000	M-CHIP RES G;QR RD 2A 2BY 0A-J(JUMPER)
R3276	61079-919-000	M-CHIP RES G;QR RD 2A 2BY 0A-J(JUMPER)
R3277	61079-919-000	M-CHIP RES G;QR RD 2A 2BY 0A-J(JUMPER)
R3280	61079-919-000	M-CHIP RES G;QR RD 2A 2BY 0A-J(JUMPER)
R3281	61079-919-000	M-CHIP RES G;QR RD 2A 2BY 0A-J(JUMPER)
R3282	61079-919-000	M-CHIP RES G;QR RD 2A 2BY 0A-J(JUMPER)
R3283	61079-919-000	M-CHIP RES G;QR RD 2A 2BY 0A-J(JUMPER)
R3285	61048-177-622	R-METAL FILM;RM 1/8TS 6.2K-J
R3501	61048-177-153	R-METAL FILM;RM 1/8TS 15K-J
R3502	61079-919-562	M-CHIP RES G;QR RD 2A 2BY 5.6K-J
R3503	61079-919-103	M-CHIP RES G;QR RD 2A 2BY 10K-J
R3504	61048-177-223	R-METAL FILM;RM 1/8TS 22K-J
R3505	61079-919-154	M-CHIP RES G;QR RD 2A 2BY 150K-J
R3506	61079-919-152	M-CHIP RES G;QR RD 2A 2BY 1.5K-J
R3507	61079-919-222	M-CHIP RES G;QR RD 2A 2BY 2.2K-J
R3508	61048-177-103	R-METAL FILM;RM 1/8TS 10K-J
R3510	61079-919-102	M-CHIP RES G;QR RD 2A 2BY 1K-J
R3511	61048-177-103	R-METAL FILM;RM 1/8TS 10K-J
T3501	A1134-0015	COIL-TRAP;7.8KHZ 23.5MH 0.018UF
VR3203	61247-101-103	VR-SEMI;EVN-DJA A03 B14 TAPG 10KB
VR3204	61247-101-472	VR-SEMI;EVN-DJA A03 BQ3 TAPG 4.7KB
VR3205	61247-101-103	VR-SEMI;EVN-DJA A03 B14 TAPG 10KB
VR3206	61247-101-103	VR-SEMI;EVN-DJA A03 B14 TAPG 10KB
X3201	64539-012-079	X-TAL;4.43 3619MHZ 8PPM TAPG

LOCA NO	PART-NUMBER	DESCRIPTION,SPECIFICATION

VIDEO PARTS (2H'D ; VR4632/VR4631)

LOCA NO	PART-NUMBER	DESCRIPTION,SPECIFICATION
C3201	61637-208-010	C-ELEC;CEAP 50V 1M SA(5X11)
C3202	61617-408-479	C-ELEC;CEAP 50V 4.7M RSS(4X7)
C3203	61407-101-482	C-CERAMIC.TEMP;CC45 SL TAPG 50V 75-J
C3204	61454-240-227	M-CHIP CAP;RL UX 050 B 0.022-Z
C3205	61637-208-010	C-ELEC;CEAP 50V 1M SA(5X11)
C3206	61507-121-550	C-POLYESTER;CQ921M TAPG 50V 473-K
C3207	61454-240-227	M-CHIP CAP;RL UX 050 B 0.022-Z
C3208	61637-208-010	C-ELEC;CEAP 50V 1M SA(5X11)
C3209	61637-608-338	C-ELEC;CEAP 50V 0.33M SV(5X9)
C3210	61637-206-100	C-ELEC;CEAP 35V 10M SA(5X11)
C3211	61454-239-103	M-CHIP CAP;RL EX 050 Y 103N
C3212	61407-117-101	C-CERAMIC.AXIAL;UP050F 104Z
C3213	61637-206-100	C-ELEC;CEAP 35V 10M SA(5X11)
C3214	61454-239-100	M-CHIP CAP;RL UX 050 SL 10-J
C3215	61637-206-100	C-ELEC;CEAP 35V 10M SA(5X11)
C3216	61454-239-820	M-CHIP CAP;RL UX 050 B 82-K
C3217	61454-239-394	M-CHIP CAP;RL UX 050 B 390-K
C3218	61627-208-010	C-ELEC;CEAP 50V 1M NP(6X11)
C3219	61454-239-560	M-CHIP CAP;RL UX 050 SL 56-J
C3220	61454-239-820	M-CHIP CAP;RL UX 050 B 82-K
C3221	61454-239-101	M-CHIP CAP;RL UX 050 SL 100-J
C3222	61454-239-103	M-CHIP CAP;RL EX 050 Y 103N
C3223	61454-239-390	M-CHIP CAP;RL UX 050 SL 50V 39-J
C3224	61454-239-181	M-CHIP CAP;RL UX 050 B 181-K
C3225	61407-117-228	C-CERAMIC.AXIAL;CK OA F 25V 223Z/F 25V 203ZT
C3226	61454-240-227	M-CHIP CAP;RL UX 050 B 0.022-Z
C3227	61454-239-479	M-CHIP CAP;RL UX 050 SL 4R7-K
C3228	61407-117-228	C-CERAMIC.AXIAL;CK OA F 25V 223Z/F 25V 203ZT
C3229	61507-121-550	C-POLYESTER;CQ921M TAPG 50V 473-K
C3230	61637-208-339	C-ELEC;CEAP 50V 3.3M SA(5X11)
C3231	61637-208-010	C-ELEC;CEAP 50V 1M SA(5X11)
C3232	61507-121-571	C-POLYESTER;CQ921M TAPG 100V 683-J
C3234	61637-205-470	C-ELEC;CEAP 25V 47M SA(6X11)
C3235	61454-239-103	M-CHIP CAP;RL EX 050 Y 103N
C3236	61454-239-103	M-CHIP CAP;RL EX 050 Y 103N
C3237	61637-205-470	C-ELEC;CEAP 25V 47M SA(6X11)
C3238	61407-117-104	C-CERAMIC.AXIAL;CAX Y TAPG 16V 0.01-N
C3239	61637-206-100	C-ELEC;CEAP 35V 10M SA(5X11)
C3240	61454-239-103	M-CHIP CAP;RL EX 050 Y 103N
C3241	61637-206-100	C-ELEC;CEAP 35V 10M SA(5X11)
C3242	61454-239-820	M-CHIP CAP;RL UX 050 B 82-K
C3247	61407-117-104	C-CERAMIC.AXIAL;CAX Y TAPG 16V 0.01-N
C3255	61407-117-104	C-CERAMIC.AXIAL;CAX Y TAPG 16V 0.01-N
C3256	61637-206-100	C-ELEC;CEAP 35V 10M SA(5X11)
C3257	61454-239-101	M-CHIP CAP;RL UX 050 SL 100-J
C3258	61454-239-330	M-CHIP CAP;RL UX 050 SL 33-J
C3299	61454-239-820	M-CHIP CAP;RL UX 050 B 82-K
C3501	61407-117-104	C-CERAMIC.AXIAL;CAX Y TAPG 16V 0.01-N
C3502	61637-204-330	C-ELEC;CEAP 16V 33M SA(5X11)
C3503	61637-205-470	C-ELEC;CEAP 25V 47M SA(6X11)
C3504	61454-239-103	M-CHIP CAP;RL EX 050 Y 103N
C3505	61637-204-330	C-ELEC;CEAP 16V 33M SA(5X11)
C3506	61407-117-104	C-CERAMIC.AXIAL;CAX Y TAPG 16V 0.01-N
CF3201	62469-006-148	COMB-FILTER;FE-2544E
CN3103	63053-211-130	LEAD CONNECTOR ASSY;1429#26 5295-51004 11P
D3101	62169-406-482	DIODE;1N4148 SAMSUNG
D3201	62169-406-482	DIODE;1N4148 SAMSUNG
D3204	62169-406-482	DIODE;1N4148 SAMSUNG
D3501	62169-406-482	DIODE;1N4148 SAMSUNG
D3603	62169-406-482	DIODE;1N4148 SAMSUNG
FL3501	64527-310-010	FILTER CERAMIC;SFE4.5MB TAPG
IC3201	B4008-0894	IC;LA7397 DIP
IC3202	B4008-0432	IC;MSM 7403RS SIP
IC3501	A4008-0035	IC;BA7025L SIP
L3201	62429-833-101	COIL-PEAKING AXIAL;BAL04ST 101K
L3202	62427-812-680	COIL-PEAKING;EL0606RA 68uH-J
L3203	62427-812-339	COIL-PEAKING;EL0606RA 3.3uH-J
L3206	62427-812-330	COIL-PEAKING;EL0606RA 33uH-J
L3207	62427-812-150	COIL-PEAKING;EL0606RA 15uH-J
L3208	62429-833-101	COIL-PEAKING AXIAL;BAL04ST 101K

LOCA.NO	PART-NUMBER	DESCRIPTION;SPECIFICATION
L3209	62429-833-101	COIL-PEAKING AXIAL;BAL04ST 101K
L3212	62427-812-820	COIL-PEAKING;EL0606RA 82uH-J
L3299	62427-812-100	COIL-PEAKING;EL0606RA 10uH-J
L3501	62429-833-101	COIL-PEAKING AXIAL;BAL04ST 101K
Q3201	62137-302-740	TRANSISTOR;KSC 945-Y TAPG
Q3202	62137-103-380	TRANSISTOR;KSA 733-Y TAPG
Q3203	62137-302-740	TRANSISTOR;KSC 945-Y TAPG
Q3204	62137-103-380	TRANSISTOR;KSA 733-Y TAPG
Q3205	62137-701-013	TRANSISTOR;KSR 1004 TAPG
Q3206	62137-103-380	TRANSISTOR;KSA 733-Y TAPG
Q3207	62137-302-740	TRANSISTOR;KSC 945-Y TAPG
Q3209	62137-302-740	TRANSISTOR;KSC 945-Y TAPG
Q3210	62137-103-380	TRANSISTOR;KSA 733-Y TAPG
Q3211	62137-302-740	TRANSISTOR;KSC 945-Y TAPG
Q3215	62137-701-013	TRANSISTOR;KSR 1004 TAPG
Q3216	62137-701-020	TRANSISTOR;KSR 2001 TAPG
Q3501	62137-302-740	TRANSISTOR;KSC 945-Y TAPG
R3201	61079-919-102	M-CHIP RES G;QR RD 2A 2BY 1K-J
R3202	61079-919-271	M-CHIP RES G;QR RD 2A 2BY 270-J
R3203	61079-919-222	M-CHIP RES G;QR RD 2A 2BY 2.2K-J
R3204	61079-919-472	M-CHIP RES G;QR RD 2A 2BY 4.7K-J
R3206	61079-919-822	M-CHIP RES G;QR RD 2A 2BY 8.2K-J
R3207	61079-919-222	M-CHIP RES G;QR RD 2A 2BY 2.2K-J
R3208	61079-919-222	M-CHIP RES G;QR RD 2A 2BY 2.2K-J
R3209	61079-919-000	M-CHIP RES G;QR RD 2A 2BY 0A-J(JUMPER)
R3210	61079-919-272	M-CHIP RES G;QR RD 2A 2BY 2.7K-J
R3211	61079-919-621	M-CHIP RES G;QR RD 2A 2BY 620-J
R3212	61079-919-102	M-CHIP RES G;QR RD 2A 2BY 1K-J
R3213	61048-177-222	R-METAL FILM;RM 1/8TS 2.2K-J
R3214	61048-177-102	R-METAL FILM;RM 1/8TS 1K-J
R3215	61048-177-472	R-METAL FILM;RM 1/8TS 4.7K-J
R3216	61079-919-122	M-CHIP RES G;QR RD 2A 2BY 1.2K-J
R3217	61079-919-182	M-CHIP RES G;QR RD 2A 2BY 1.8K-J
R3218	61079-919-511	M-CHIP RES G;QR RD 2A 2BY 510-J
R3219	61048-177-332	R-METAL FILM;RM 1/8TS 3.3K-J
R3221	61079-919-102	M-CHIP RES G;QR RD 2A 2BY 1K-J
R3222	61079-919-271	M-CHIP RES G;QR RD 2A 2BY 270-J
R3223	61079-919-102	M-CHIP RES G;QR RD 2A 2BY 1K-J
R3224	61079-919-332	M-CHIP RES G;QR RD 2A 2BY 3.3K-J
R3225	61079-919-222	M-CHIP RES G;QR RD 2A 2BY 2.2K-J
R3227	61079-919-103	M-CHIP RES G;QR RD 2A 2BY 10K-J
R3228	61079-919-202	M-CHIP RES G;QR RD 2A 2BY 2K-J
R3230	61079-919-223	M-CHIP RES G;QR RD 2A 2BY 22K-J
R3231	61079-919-103	M-CHIP RES G;QR RD 2A 2BY 10K-J
R3232	61048-177-182	R-METAL FILM;RM 1/8TS 1.8K-J
R3234	61079-919-105	M-CHIP RES G;QR RD 2A 2BY 1M-J
R3236	61079-919-152	M-CHIP RES G;QR RD 2A 2BY 1.5K-J
R3240	61048-177-222	R-METAL FILM;RM 1/8TS 2.2K-J
R3241	61079-919-102	M-CHIP RES G;QR RD 2A 2BY 1K-J
R3242	61079-919-221	M-CHIP RES G;QR RD 2A 2BY 220-J
R3243	61079-919-823	M-CHIP RES G;QR RD 2A 2BY 82K-J
R3244	61048-177-273	R-METAL FILM;RM 1/8TS 27K-J
R3249	61079-919-122	M-CHIP RES G;QR RD 2A 2BY 1.2K-J
R3250	61079-919-102	M-CHIP RES G;QR RD 2A 2BY 1K-J
R3255	61079-919-000	M-CHIP RES G;QR RD 2A 2BY 0A-J(JUMPER)
R3260	61079-919-000	M-CHIP RES G;QR RD 2A 2BY 0A-J(JUMPER)
R3261	61079-919-000	M-CHIP RES G;QR RD 2A 2BY 0A-J(JUMPER)
R3263	61079-919-000	M-CHIP RES G;QR RD 2A 2BY 0A-J(JUMPER)
R3264	61079-919-000	M-CHIP RES G;QR RD 2A 2BY 0A-J(JUMPER)
R3268	61079-919-000	M-CHIP RES G;QR RD 2A 2BY 0A-J(JUMPER)
R3272	61079-919-000	M-CHIP RES G;QR RD 2A 2BY 0A-J(JUMPER)
R3274	61079-919-000	M-CHIP RES G;QR RD 2A 2BY 0A-J(JUMPER)
R3276	61079-919-000	M-CHIP RES G;QR RD 2A 2BY 0A-J(JUMPER)
R3280	61079-919-000	M-CHIP RES G;QR RD 2A 2BY 0A-J(JUMPER)
R3281	61079-919-000	M-CHIP RES G;QR RD 2A 2BY 0A-J(JUMPER)
R3282	61079-919-000	M-CHIP RES G;QR RD 2A 2BY 0A-J(JUMPER)
R3283	61079-919-000	M-CHIP RES G;QR RD 2A 2BY 0A-J(JUMPER)
R3285	61048-177-622	R-METAL FILM;RM 1/8TS 6.2K-J
R3501	61048-177-153	R-METAL FILM;RM 1/8TS 15K-J
R3502	61079-919-562	M-CHIP RES G;QR RD 2A 2BY 5.6K-J
R3503	61079-919-103	M-CHIP RES G;QR RD 2A 2BY 10K-J
R3504	61048-177-223	R-METAL FILM;RM 1/8TS 22K-J
R3505	61079-919-154	M-CHIP RES G;QR RD 2A 2BY 150K-J
R3506	61079-919-152	M-CHIP RES G;QR RD 2A 2BY 1.5K-J
R3507	61079-919-222	M-CHIP RES G;QR RD 2A 2BY 2.2K-J
R3508	61048-177-103	R-METAL FILM;RM 1/8TS 10K-J
R3510	61079-919-102	M-CHIP RES G;QR RD 2A 2BY 1K-J
R3511	61048-177-103	R-METAL FILM;RM 1/8TS 10K-J
T3501	A1134-0015	COIL-TRAP;7.8KHZ 23.5MH 0.018UF
VR3203	61247-101-103	VR-SEMI;EVN-DJA A03 B14 TAPG 10KB
VR3204	61247-101-472	VR-SEMI;EVN-DJA A03 BQ3 TAPG 4.7KB
VR3205	61247-101-103	VR-SEMI;EVN-DJA A03 B14 TAPG 10KB
VR3206	61247-101-103	VR-SEMI;EVN-DJA A03 B14 TAPG 10KB
X3201	64539-012-079	X-TAL;4.43 3619MHZ 8PPM TAPG

AUDIO PARTS

C501	61637-208-010	C-ELEC;CEAP 50V 1M SA(5X11)
C502	61454-239-221	M-CHIP CAP;RL UX 050 B 220-J
C503	61507-339-010	C-POLYESTER;MDX 100V TAPG 473-K
C504	61637-205-470	C-ELEC;CEAP 25V 47M SA(6X11)
C505	61507-121-630	C-POLTESTER;CQ921M TAPG 100V 123-K
C506	61507-121-430	C-POLYESTER;CQ921M TAPG 100V 472-K
C507	61507-121-450	C-POLYESTER;CQ921M TAPG 50V 682-K
C508	61507-121-341	C-POLYESTER;CQ921M TAPG 50V 102-J
C509	61507-121-390	C-POLYESTER;CQ921M TAPG 100V 222-K
C511	61637-204-330	C-ELEC;CEAP 16V 33M SA(5X11)
C512	61507-121-470	C-POLYESTER;CQ921M TAPG 100V 103-K
C513	61637-208-019	C-ELEC;CEAP 50V 0.1M SA(5X11)
C514	61637-204-220	C-ELEC;CEAP 16V 22M SA
C515	61637-208-019	C-ELEC;CEAP 50V 0.1M SA(5X11)
C518	61507-121-491	C-POLYESTER;CQ921M TAPG 50V 183-J
C519	61507-121-460	C-POLYESTER;CQ921M TAPG 100V 822-K
C520	61507-121-450	C-POLYESTER;CQ921M TAPG 50V 682-K
C521	61637-206-100	C-ELEC;CEAP 35V 10M SA(5X11)
C522	61507-121-520	C-POLYESTER;CQ921M TAPG 50V 273-K
C523	61507-121-470	C-POLYESTER;CQ921M TAPG 100V 103-K
C524	61617-408-479	C-ELEC;CEAP 50V 4.7M RSS(4X7)
C525	61637-204-220	C-ELEC;CEAP 16V 22M SA
C526	61637-504-101	C-ELEC;CEAP 16V 100M SG(6.3X11)
CN501	63053-917-534	LEAD CONNECTOR ASSY;1533 #26 5264-5264
D501	62169-406-482	DIODE;1N4148 SAMSUNG
FL501	62429-014-138	COIL-BIAS OSC;269QN-K5022YCT
IC501	62119-103-731	IC;LA7282(AUDIO)
L501	62427-813-153	COIL-PEAKING;EL0607RA 15mH-J
L502	62427-813-153	COIL-PEAKING;EL0607RA 15mH-J
L503	62427-812-101	COIL-PEAKING;EL0606RA 100uH-J
Q501	62137-701-013	TRANSISTOR;KSR 1004 TAPG
Q502	62137-701-020	TRANSISTOR;KSR 2001 TAPG
Q503	62137-702-020	TRANSISTOR;KSC 1008-Y TAPG
Q504	62137-701-013	TRANSISTOR;KSR 1004 TAPG
R501	61079-919-303	M-CHIP RES G;QR RD 2A 2BY 30K-J
R502	61048-177-333	R-METAL FILM;RM 1/8TS 33K-J
R503	61079-919-181	M-CHIP RES G;QR RD 2A 2BY 180-J
R504	61079-919-334	M-CHIP RES G;QR RD 2A 2BY 330K-J
R505	61079-919-123	M-CHIP RES G;QR RD 2A 2BY 12K-J
R506	61079-919-101	M-CHIP RES G;QR RD 2A 2BY 100-J
R507	61079-919-000	M-CHIP RES G;QR RD 2A 2BY 0A-J(JUMPER)
R508	61079-919-103	M-CHIP RES G;QR RD 2A 2BY 10K-J
R509	61048-177-225	R-METAL FILM;RM 1/8TS 2.2M-J
R510	61079-919-203	M-CHIP RES G;QR RD 2A 2BY 20K-J
R511	61048-177-273	R-METAL FILM;RM 1/8TS 27K-J
R512	61079-919-303	M-CHIP RES G;QR RD 2A 2BY 30K-J
R513	61079-919-203	M-CHIP RES G;QR RD 2A 2BY 20K-J
R515	61048-177-821	R-METAL FILM;RM 1/8TS 820-J
R516	61079-919-183	M-CHIP RES G;QR RD 2A 2BY 18K-J
R517	61048-177-362	R-METAL FILM;RM 1/8TS 3.6K-J
R518	61079-919-681	M-CHIP RES G;QR RD 2A 2BY 680-J
R519	61048-177-102	R-METAL FILM;RM 1/8TS 1K-J
R520	61079-919-223	M-CHIP RES G;QR RD 2A 2BY 22K-J
R521	61048-177-479	R-METAL FILM;RM 1/8TS 4.7-J
R522	61079-919-100	M-CHIP RES G;QR RD 2A 2BY 10-J
R523	61079-919-103	M-CHIP RES G;QR RD 2A 2BY 10K-J
R525	61079-919-000	M-CHIP RES G;QR RD 2A 2BY 0A-J(JUMPER)
R526	61079-919-000	M-CHIP RES G;QR RD 2A 2BY 0A-J(JUMPER)
R527	61079-919-000	M-CHIP RES G;QR RD 2A 2BY 0A-J(JUMPER)
VR501	61247-101-104	VR-SEMI;EVN-DJA A03 B15 TAPG 100KB

TUNER PARTS

LOCA.NO	PART-NUMBER	DESCRIPTION;SPECIFICATION
	V4519-903-233	TUNER;TERE 1X0B5A
	V7189-0008-00	RF-CONVERTER;MDLK 6D745A-EU
	63054-401-823	COAXIAL-CABLE ASSY;SD-C123-14A FTZ
	A3040-0030	JACK-SCART;ABS 94HB+BSB T0.4
C401	A1102-0148	C-FILM;CF 922 P 100V T 104-J /C-M 365
C402	A1102-0148	C-FILM;CF 922 P 100V T 104-J /C-M 365
C403	A1102-0148	C-FILM;CF 922 P 100V T 104-J /C-M 365
C404	A1102-0148	C-FILM;CF 922 P 100V T 104-J /C-M 365
C405	61637-208-010	C-ELEC;CEAP 50V 1M SA(5X11)
C406	61454-239-103	M-CHIP CAP;RL EX 050 Y 103N
C407	61454-239-103	M-CHIP CAP;RL EX 050 Y 103N
C408	61637-205-470	C-ELEC;CEAP 25V 47M SA(6X11)
C409	61637-503-471	C-ELEC;CEAP 10V 470M SG(8X11.5)
C410	61454-239-820	M-CHIP CAP;RL UX 050 B 82-K
C411	61454-239-221	M-CHIP CAP;RL UX 050 B 220-J
C412	61637-205-470	C-ELEC;CEAP 25V 47M SA(6X11)
C414	61637-208-229	C-ELEC;CEAP 50V 2.2M SA (5X11)
C415	61454-239-820	M-CHIP CAP;RL UX 050 B 82-K
C417	61637-206-100	C-ELEC;CEAP 35V 10M SA(5X11)
C418	61637-206-100	C-ELEC;CEAP 35V 10M SA(5X11)
C419	61617-408-479	C-ELEC;CEAP 50V 4.7M RSS(4X7)
C420	61454-239-820	M-CHIP CAP;RL UX 050 B 82-K
C421	61637-206-100	C-ELEC;CEAP 35V 10M SA(5X11)
C422	61637-206-100	C-ELEC;CEAP 35V 10M SA(5X11)
C423	61637-206-100	C-ELEC;CEAP 35V 10M SA(5X11)
C424	61454-239-820	M-CHIP CAP;RL UX 050 B 82-K
C425	61637-504-101	C-ELEC;CEAP 16V 100M SG(6.3X11)
C426	61454-239-103	M-CHIP CAP;RL EX 050 Y 103N
C427	61637-205-470	C-ELEC;CEAP 25V 47M SA(6X11)
C428	61637-208-010	C-ELEC;CEAP 50V 1M SA(5X11)
C429	61637-208-010	C-ELEC;CEAP 50V 1M SA(5X11)
C431	61454-239-103	M-CHIP CAP;RL EX 050 Y 103N
C432	61637-206-100	C-ELEC;CEAP 35V 10M SA(5X11)
C433	61637-205-470	C-ELEC;CEAP 25V 47M SA(6X11)
C435	61407-101-480	C-CERAMIC.TEMP;CC45 SL TAPG 50V 330-J
C436	61407-101-460	C-CERAMIC.TEMP;CC45 SL TAPG 50V 270-J
CN404	63349-062-320	CONNECTOR-WAFER;5267-03A STICK
D401	62169-406-482	DIODE;1N4148 SAMSUNG
IC401	62119-401-310	IC;KA8403
IC402	62119-401-310	IC;KA8403
IC403	62119-401-370	IC;LA7920
L400	62427-812-187	COIL-PEAKING;EL606RA 12uH-J
L401	62427-812-101	COIL-PEAKING;EL0606RA 100uH-J
L402	62427-812-180	COIL-PEAKING;EL0606RA 18uH-J
L403	62429-833-101	COIL-PEAKING AXIAL;BAL04ST 101K
L404	62427-020-011	COIL PEAKING.AXIAL;LAL02TB 100J TAPG
L405	62427-812-188	COIL PEAKING;EL0606RA 0.47uH-M
L406	62427-020-479	COIL PEAKING.AXIAL;LAL02TB 4R7J TAPG
L407	62427-812-829	COIL-PEAKING;EL0606RA 8.2uH-J
L408	62427-812-829	COIL-PEAKING;EL0606RA 8.2uH-J
Q401	62137-302-740	TRANSISTOR;KSC 945-Y TAPG
Q402	62137-103-380	TRANSISTOR;KSA 733-Y TAPG
Q403	62137-302-740	TRANSISTOR;KSC 945-Y TAPG
Q404	62137-103-380	TRANSISTOR;KSA 733-Y TAPG
Q405	62137-701-013	TRANSISTOR;KSR 1004 TAPG
Q406	62137-302-740	TRANSISTOR;KSC 945-Y TAPG
Q409	62137-702-020	TRANSISTOR;KSC 1008-Y TAPG
Q410	62137-302-740	TRANSISTOR;KSC 945-Y TAPG
Q411	62137-103-380	TRANSISTOR;KSA 733-Y TAPG
R401	61048-177-223	R-METAL FILM;RM 1/8TS 22K-J
R402	61079-919-223	M-CHIP RES G;QR RD 2A 2BY 22K-J
R403	61048-177-223	R-METAL FILM;RM 1/8TS 22K-J
R404	61048-177-273	R-METAL FILM;RM 1/8TS 27K-J
R405	61048-177-273	R-METAL FILM;RM 1/8TS 27K-J
R406	61048-177-273	R-METAL FILM;RM 1/8TS 27K-J
R407	61048-177-273	R-METAL FILM;RM 1/8TS 27K-J
R408	61079-919-224	M-CHIP RES G;QR RD 2A 2BY 220K-J
R409	61079-919-683	M-CHIP RES G;QR RD 2A 2BY 68K-J

LOCA.NO	PART-NUMBER	DESCRIPTION;SPECIFICATION
R410	61079-919-561	M-CHIP RES G;QR RD 2A 2BY 560-J
R411	61079-919-104	M-CHIP RES G;QR RD 2A 2BY 100K-J
R412	61079-919-561	M-CHIP RES G;QR RD 2A 2BY 560-J
R413	61079-919-105	M-CHIP RES G;QR RD 2A 2BY 1M-J
R414	61048-177-104	R-METAL FILM;RM 1/8TS 100K-J
R415	61079-919-103	M-CHIP RES G;QR RD 2A 2BY 10K-J
R416	61079-919-104	M-CHIP RES G;QR RD 2A 2BY 100K-J
R417	61079-919-151	M-CHIP RES G;QR RD 2A 2BY 150-J
R418	61079-919-680	M-CHIP RES G;QR RD 2A 2BY 68-J
R419	61079-919-750	M-CHIP RES G;QR RD 2A 2BY 75-J
R420	61079-919-471	M-CHIP RES G;QR RD 2A 2BY 470-J
R421	61079-919-471	M-CHIP RES G;QR RD 2A 2BY 470-J
R422	61079-919-471	M-CHIP RES G;QR RD 2A 2BY 470-J
R423	61079-919-102	M-CHIP RES G;QR RD 2A 2BY 1K-J
R424	61079-919-471	M-CHIP RES G;QR RD 2A 2BY 470-J
R426	61079-919-561	M-CHIP RES G;QR RD 2A 2BY 560-J
R427	61079-919-222	M-CHIP RES G;QR RD 2A 2BY 2.2K-J
R428	61079-919-750	M-CHIP RES G;QR RD 2A 2BY 75-J
R429	61079-919-000	M-CHIP RES G;QR RD 2A 2BY 0A-J(JUMPER)
R430	61079-919-000	M-CHIP RES G;QR RD 2A 2BY 0A-J(JUMPER)
R431	61079-919-750	M-CHIP RES G;QR RD 2A 2BY 75-J
R434	61079-919-000	M-CHIP RES G;QR RD 2A 2BY 0A-J(JUMPER)
R435	61079-919-000	M-CHIP RES G;QR RD 2A 2BY 0A-J(JUMPER)
R437	61079-919-000	M-CHIP RES G;QR RD 2A 2BY 0A-J(JUMPER)
R439	61079-919-101	M-CHIP RES G;QR RD 2A 2BY 100-J
VR401	61247-101-103	VR-SEMI;EVN-DJA A03 B14 TAPG 10KB

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601	69228-302-201	ASSY LP SKEW;X-3 PAL 4H'D (VR4633)
C3401	61637-205-470	C-ELEC;CEAP 25V 47M SA(6X11)
C3402	61454-239-103	M-CHIP CAP;RL EX 050 Y 103N
C3403	61637-205-470	C-ELEC;CEAP 25V 47M SA(6X11)
C3404	61637-205-470	C-ELEC;CEAP 25V 47M SA(6X11)
C3405	61637-206-100	C-ELEC;CEAP 35V 10M SA(5X11)
C3406	61454-239-680	M-CHIP CAP;RL UX 050 SL 68-J
C3407	61454-239-220	M-CHIP CAP;RL UX 050 SL 22-J
C3408	61454-239-390	M-CHIP CAP;RL UX 050 SL 50V 39-J
C3409	61637-205-470	C-ELEC;CEAP 25V 47M SA(6X11)
C3410	61454-239-103	M-CHIP CAP;RL EX 050 Y 103N
C3411	61454-239-103	M-CHIP CAP;RL EX 050 Y 103N
C3412	61637-205-470	C-ELEC;CEAP 25V 47M SA(6X11)
C3413	61637-608-338	C-ELEC;CEAP 50V 0.33M SV(5X9)
C3414	61454-239-220	M-CHIP CAP;RL UX 050 SL 22-J
C3415	61637-206-100	C-ELEC;CEAP 35V 10M SA(5X11)
C3416	61637-208-010	C-ELEC;CEAP 50V 1M SA(5X11)
C3417	61617-408-479	C-ELEC;CEAP 50V 4.7M RSS(4X7)
C3418	61617-408-479	C-ELEC;CEAP 50V 4.7M RSS(4X7)
C3419	61507-121-470	C-POLYESTER;CQ921M TAPG 100V 103-K
C3421	61507-121-470	C-POLYESTER;CQ921M TAPG 100V 103-K
C3422	61454-239-829	M-CHIP CAP;RL UX050 SL 8R2K
C3423	61454-239-103	M-CHIP CAP;RL EX 050 Y 103N
C3424	61507-121-410	C-POLYESTER;CQ921M TAPG 50V 332-K
C3425	61454-239-103	M-CHIP CAP;RL EX 050 Y 103N
C3426	61407-117-104	C-CERAMIC.AXIAL;CAX Y TAPG 16V 0.01-N
C3427	61507-121-470	C-POLYESTER;CQ921M TAPG 100V 103-K
C3428	61407-105-320	C-CERAMIC.TEMP;CC45 CH TAPG 50V 82-J
C3429	61454-239-103	M-CHIP CAP;RL EX 050 Y 103N
C3430	61637-205-470	C-ELEC;CEAP 25V 47M SA(6X11)
C3431	61507-121-390	C-POLYESTER;CQ921M TAPG 100V 222-K
C3432	61507-121-390	C-POLYESTER;CQ921M TAPG 100V 222-K
C3433	61507-121-520	C-POLYESTER;CQ921M TAPG 50V 273-K
C3434	61407-117-104	C-CERAMIC.AXIAL;CAX Y TAPG 16V 0.01-N
C3435	61507-121-470	C-POLYESTER;CQ921M TAPG 100V 103-K
C3436	61507-121-340	C-POLYESTER;CQ921M TAPG 100V 102-K
C3437	61617-408-479	C-ELEC;CEAP 50V 4.7M RSS(4X7)
C3438	61454-239-200	M-CHIP CAP;RL UX 050 SL 20J-J
C3439	61637-205-470	C-ELEC;CEAP 25V 47M SA(6X11)
C3440	61637-208-010	C-ELEC;CEAP 50V 1M SA(5X11)
C3441	61454-239-103	M-CHIP CAP;RL EX 050 Y 103N

LOCA.NO	PART-NUMBER	DESCRIPTION,SPECIFICATION
C3442	61454-239-220	M-CHIP CAP;RL UX 050 SL 22-J
C3443	61454-239-103	M-CHIP CAP;RL EX 050 Y 103N
C3444	61454-239-103	M-CHIP CAP;RL EX 050 Y 103N
C3446	61454-240-227	M-CHIP CAP;RL UX 050 B 0.022-Z
C3449	61407-117-228	C-CERAMIC.AXIAL;CK OA F 25V 223Z/F 25V 203ZT
C3450	61454-239-820	M-CHIP CAP;RL UX 050 B 82-K
C3451	61454-239-390	M-CHIP CAP;RL UX 050 SL 50V 39-J
CN3402	A6010-0378	CONNECTOR-WAFER;5097-09J WHT
D3401	62169-406-482	DIODE;1N4148 SAMSUNG
D3402	62169-406-482	DIODE;1N4148 SAMSUNG
D3405	62169-406-482	DIODE;1N4148 SAMSUNG
D3406	62169-406-482	DIODE;1N4148 SAMSUNG
D3407	62169-406-482	DIODE;1N4148 SAMSUNG
FL3401	A1134-0015	COIL-TRAP;7.8KHZ 23.5MH 0.018UF
IC3403	62119-102-536	IC;AN3592K
IC3404	62119-103-699	IC;MST001RS
IC3405	62119-103-697	IC;MSM6989RS
IC3406	62119-401-302	IC;KA8402(TA7347P)
L3401	62427-812-101	COIL-PEAKING;EL0606RA 100uH-J
L3403	62427-812-100	COIL-PEAKING;EL0606RA 10uH-J
L3404	62427-812-560	COIL-PEAKING;EL0606RA 56uH-J
L3405	62427-812-180	COIL-PEAKING;EL0606RA 18uH-J
L3406	62427-812-101	COIL-PEAKING;EL0606RA 100uH-J
L3407	62427-812-270	COIL-PEAKING;EL0606RA 27uH-J
L3408	62427-812-339	COIL-PEAKING;EL0606RA 3.3uH-J
L3409	62427-812-150	COIL-PEAKING;EL0606RA 15uH-J
L3410	62427-812-101	COIL-PEAKING;EL0606RA 100uH-J
Q3401	62137-701-013	TRANSISTOR;KSR 1004 TAPG
Q3402	62137-302-740	TRANSISTOR;KSC 945-Y TAPG
Q3403	62137-103-380	TRANSISTOR;KSA 733-Y TAPG
Q3404	62137-302-740	TRANSISTOR;KSC 945-Y TAPG
Q3405	62137-701-013	TRANSISTOR;KSR 1004 TAPG
Q3406	62137-701-020	TRANSISTOR;KSR 2001 TAPG
Q3407	62137-701-013	TRANSISTOR;KSR 1004 TAPG
Q3408	62137-701-013	TRANSISTOR;KSR 1004 TAPG
Q3409	62137-103-380	TRANSISTOR;KSA 733-Y TAPG
Q3410	62137-302-740	TRANSISTOR;KSC 945-Y TAPG
R3401	61079-917-472	R-MG.CHIP;RMC 1/10 4.7K-J
R3402	61079-919-103	M-CHIP RES G;QR RD 2A 2BY 10K-J
R3403	61079-919-391	M-CHIP RES G;QR RD 2A 2BY 390-J
R3404	61079-919-301	M-CHIP RES G;QR RD 2A 2BY 300-J
R3405	61048-177-221	R-METAL FILM;RM 1/8TS 220-J
R3406	61079-919-102	M-CHIP RES G;QR RD 2A 2BY 1K-J
R3407	61079-919-152	M-CHIP RES G;QR RD 2A 2BY 1.5K-J
R3408	61079-919-102	M-CHIP RES G;QR RD 2A 2BY 1K-J
R3409	61079-919-682	M-CHIP RES G;QR RD 2A 2BY 6.8K-J
R3410	61079-919-471	M-CHIP RES G;QR RD 2A 2BY 470-J
R3411	61079-919-471	M-CHIP RES G;QR RD 2A 2BY 470-J
R3412	61079-919-473	M-CHIP RES G;QR RD 2A 2BY 47K-J
R3413	61079-919-272	M-CHIP RES G;QR RD 2A 2BY 2.7K-J
R3414	61079-919-821	M-CHIP RES G;QR RD 2A 2BY 820-J
R3415	61079-919-104	M-CHIP RES G;QR RD 2A 2BY 100K-J
R3416	61079-919-223	M-CHIP RES G;QR RD 2A 2BY 22K-J
R3417	61079-919-103	M-CHIP RES G;QR RD 2A 2BY 10K-J
R3419	61079-919-472	M-CHIP RES G;QR RD 2A 2BY 4.7K-J
R3420	61079-919-123	M-CHIP RES G;QR RD 2A 2BY 12K-J
R3421	61048-177-623	R-METAL FILM;RM 1/8TS 62K-J
R3424	61079-919-431	M-CHIP RES G;QR RD 2A 2BY 430-J
R3425	61079-919-471	M-CHIP RES G;QR RD 2A 2BY 470-J
R3427	61048-177-122	R-METAL FILM;RM 1/8TS 1.2K-J
R3429	61079-919-201	M-CHIP RES G;QR RD 2A 2BY 200-J
R3430	61079-919-221	M-CHIP RES G;QR RD 2A 2BY 220-J
R3431	61079-919-223	M-CHIP RES G;QR RD 2A 2BY 22K-J
R3432	61079-919-103	M-CHIP RES G;QR RD 2A 2BY 10K-J
R3433	61079-919-154	M-CHIP RES G;QR RD 2A 2BY 150K-J
R3434	61079-919-361	M-CHIP RES G;QR RD 2A 2BY 360-J
R3435	61079-919-272	M-CHIP RES G;QR RD 2A 2BY 2.7K-J
R3436	61079-919-392	M-CHIP RES G;QR RD 2A 2BY 3.9K-J
R3438	61079-919-000	M-CHIP RES G;QR RD 2A 2BY 0A-J(JUMPER)
R3440	61079-919-273	M-CHIP RES G;QR RD 2A 2BY 27K-J
R3441	61079-919-473	M-CHIP RES G;QR RD 2A 2BY 47K-J
R3445	61079-919-104	M-CHIP RES G;QR RD 2A 2BY 100K-J
R3446	61079-919-104	M-CHIP RES G;QR RD 2A 2BY 100K-J
R3447	61079-919-122	M-CHIP RES G;QR RD 2A 2BY 1.2K-J
R3450	61079-919-104	M-CHIP RES G;QR RD 2A 2BY 100K-J
R3453	61079-919-000	M-CHIP RES G;QR RD 2A 2BY 0A-J(JUMPER)
VR3401	61247-101-473	VR-SEMI;EVN-DXA A03 BQ4 TAPG 47KB
VR3402	61247-101-102	VR-SEMI;EVN-DJA A03 B13 TAPG 1KB
ZD3401	62169-403-301	DIODE-ZENER;UZ 3.0B TAPG

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LOCA.NO	PART-NUMBER	DESCRIPTION,SPECIFICATION
602	69252-302-202	ASSY OSD;X-3 PAL (SST)
	61407-105-28C	C-CERAMIC.TEMP;CC45 CH TAPG 50V 56-J
C901	61637-205-470	C-ELEC;CEAP 25V 47M SA(6X11)
C902	61407-117-228	C-CERAMIC.AXIAL;CK OA F 25V 223Z/F 25V 203ZT
C903	61407-101-210	C-CERAMIC.TEMP;CC45 SL TAPG 50V 24-J
C904	61407-105-160	C-CERAMIC.TEMP;CC45 CH TAPG 50V 18-J
C905	61407-117-104	C-CERAMIC.AXIAL;CAX Y TAPG 16V 0.01-N
C906	61407-117-104	C-CERAMIC.AXIAL;CAX Y TAPG 16V 0.01-N
C907	61637-206-100	C-ELEC;CEAP 35V 10M SA(5X11)
C908	61637-504-101	C-ELEC;CEAP 16V 100M SG(6.3X11)
C909	61507-121-340	C-POLYESTER;CQ921M TAPG 100V 102-K
C910	61507-121-420	C-POLYESTER;CQ921M TAPG 100V 392-K
C911	61407-117-270	C-CERAMIC AXIAL;CK OA B 50V 271K/B 50V 271KT
C912	61637-208-010	C-ELEC;CEAP 50V 1M SA(5X11)
C913	61407-101-483	C-CERAMIC.TEMP;CC45 SL TAPG 50V 47-J
C914	61407-105-320	C-CERAMIC.TEMP;CC45 CH TAPG 50V 82-J
C915	61407-105-320	C-CERAMIC.TEMP;CC45 CH TAPG 50V 82-J
C916	61637-208-010	C-ELEC;CEAP 50V 1M SA(5X11)
C917	61637-208-478	C-ELEC;CEAP 50V 0.47M SA(5X11)
C918	A1102-0148	C-FILM;CF 922 P 100V T 104-J /C-M 365 26104/3E
C919	61637-504-101	C-ELEC;CEAP 16V 100M SG(6.3X11)
C920	61407-117-104	C-CERAMIC.AXIAL;CAX Y TAPG 16V 0.01-N
C921	61617-408-479	C-ELEC;CEAP 50V 4.7M RSS(4X7)
C922	61637-205-470	C-ELEC;CEAP 25V 47M SA(6X11)
C923	61407-117-104	C-CERAMIC.AXIAL;CAX Y TAPG 16V 0.01-N
C924	61407-117-104	C-CERAMIC.AXIAL;CAX Y TAPG 16V 0.01-N
C927	61407-117-228	C-CERAMIC.AXIAL;CK OA F 25V 223Z/F 25V 203ZT
C928	61407-117-228	C-CERAMIC.AXIAL;CK OA F 25V 223Z/F 25V 203ZT
C929	61637-206-100	C-ELEC;CEAP 35V 10M SA(5X11)
CN902	A6010-0375	CONNECTOR-WAFER;5097-06J WHT
D901	62169-406-482	DIODE;1N4148 SAMSUNG
D902	62169-406-482	DIODE;1N4148 SAMSUNG
D903	62169-406-482	DIODE;1N4148 SAMSUNG
D904	62169-406-482	DIODE;1N4148 SAMSUNG
D905	62169-406-482	DIODE;1N4148 SAMSUNG
IC901	A4008-0995	IC;KS5513C DIP
L901	62427-812-150	COIL-PEAKING;EL0606RA 15uH-J
L902	62427-812-150	COIL-PEAKING;EL0606RA 15uH-J
L903	62427-812-187	COIL-PEAKING;EL606RA 12uH-J
L904	62427-812-470	COIL-PEAKING;EL0606RA 47uH-J
L906	62427-812-101	COIL-PEAKING;EL0606RA 100uH-J
Q901	62137-302-740	TRANSISTOR;KSC 945-Y TAPG
Q902	62137-103-380	TRANSISTOR;KSA 733-Y TAPG
Q903	62137-302-740	TRANSISTOR;KSC 945-Y TAPG
Q904	62137-302-740	TRANSISTOR;KSC 945-Y TAPG
Q905	62137-302-740	TRANSISTOR;KSC 945-Y TAPG
Q907	62137-702-020	TRANSISTOR;KSC 1008-Y TAPG
R901	61048-177-222	R-METAL FILM;RM 1/8TS 2.2K-J
R902	61048-177-821	R-METAL FILM;RM 1/8TS 820-J
R903	61048-177-681	R-METAL FILM;RM 1/8TS 680-J
R904	61048-177-682	R-METAL FILM;RM 1/8TS 6.8K-J
R905	61048-177-123	R-METAL FILM;RM 1/8TS 12K-J
R906	61048-177-153	R-METAL FILM;RM 1/8TS 15K-J
R907	61048-177-272	R-METAL FILM,RM 1/8TS 2.7K-J
R909	61048-177-681	R-METAL FILM;RM 1/8TS 680-J
R910	61048-177-273	R-METAL FILM;RM 1/8TS 27K-J
R911	61048-177-622	R-METAL FILM;RM 1/8TS 6.2K-J
R912	61048-177-105	R-METAL FILM;RM 1/8TS 1M-J
R913	61048-177-222	R-METAL FILM;RM 1/8TS 2.2K-J
R914	61048-177-103	R-METAL FILM;RM 1/8TS 10K-J
R915	61048-177-564	R-METAL FILM;RM 1/8TS 560K-J

LOCA.NO	PART-NUMBER	DESCRIPTION;SPECIFICATION
R916	61048-177-101	R-METAL FILM;RM 1/8TS 100-J
R917	61048-177-273	R-METAL FILM;RM 1/8TS 27K-J
R918	61048-177-103	R-METAL FILM;RM 1/8TS 10K-J
R919	61048-177-102	R-METAL FILM;RM 1/8TS 1K-J
R921	61048-177-203	R-METAL FILM;RM 1/8TS 20K-J
R922	61048-177-393	R-METAL FILM;RM 1/8TS 39K-J
R923	61048-177-102	R-METAL FILM;RM 1/8TS 1K-J
R924	61048-177-102	R-METAL FILM;RM 1/8TS 1K-J
R925	*61048-177-104*	*R-METAL FILM;RM 1/8TS 100K-J*
R926	61048-177-513	R-METAL FILM;RM 1/8TS 51K-J
R933	61048-177-222	R-METAL FILM;RM 1/8TS 2.2K-J
R936	61048-177-103	R-METAL FILM;RM 1/8TS 10K-J
R937	61048-177-473	R-METAL FILM;RM 1/8TS 47K-J
R954	61048-177-150	R-METAL FILM;RM 1/8TS 15-J
XT901	64539-012-543	CRYSTAL;17.734475M(20ppm)
ZD901	62169-403-789	DIODE-ZENER;MTZ5.6C TAPG

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605	69322-302-213	ASSY IF PACK;X-3 PAL FTZ(B/G)
C4101	61454-239-479	M-CHIP CAP;RL UX 050 SL 4R7-K
C4102	61454-239-270	M-CHIP CAP;RL UX 050 SL 27-J
C4103	61454-239-103	M-CHIP CAP;RL EX 050 Y 103N
C4104	61454-239-479	M-CHIP CAP;RL UX 050 SL 4R7-K
C4105	61454-239-270	M-CHIP CAP;RL UX 050 SL 27-J
C4106	61454-239-103	M-CHIP CAP;RL EX 050 Y 103N
C4107	61454-239-103	M-CHIP CAP;RL EX 050 Y 103N
C4108	61454-239-103	M-CHIP CAP;RL EX 050 Y 103N
C4109	61454-239-103	M-CHIP CAP;RL EX 050 Y 103N
C4110	61617-404-470	C-ELEC;CEAP 16V 47M RSS(6.3X7)
C4111	A1102-0148	C-FILM;CF 922 P 100V T 104-J /C-M 365 26104/3E
C4112	61617-408-478	C-ELEC;CEAP 50V 0.47M RSS(4X7)
C4113	61454-239-150	M-CHIP CAP;RL UX 050 SL 15-J
C4114	61454-239-180	M-CHIP CAP;RL UX 050 SL 18-J
C4115	61454-239-220	M-CHIP CAP;RL UX 050 SL 22-J
C4116	61454-239-390	M-CHIP CAP;RL UX 050 SL 50V 39-J
C4117	61507-121-470	C-POLYESTER;CQ921M TAPG 100V 103-K
C4118	61454-239-100	M-CHIP CAP;RL UX 050 SL 10-J
C4119	61454-240-227	M-CHIP CAP;RL UX 050 B 0.022-Z
C4120	61617-408-229	C-ELEC;CEAP 50V 2.2M RSS(4X7)
C4121	61507-121-481	C-POLTESTER;CQ921M TAPG 50V 153-J
CN4101	60549-0037-00	PIN-CONNECTOR;M1 W8.5 GIL-GC-10(2.5) ZD2
FL4101	62429-832-021	COIL-TRAP;DAISIN 40.4MHZ(G-10)
FL4102	62429-832-009	COIL-TRAP;DAISIN 32.4MHZ(G-10)
FL4103	B1245-0002	SAW-FILTER;SAF 38.9MZH80Z
FL4104	62719-049-012	TRANS-RESONANT(TI);40MHZ V-DET
FL4105	62719-049-013	TRANS-AFT(T2);40MHZ AFT-BAL
FL4106	64527-101-001	FILTER CERAMIC TRAP;TPS 5.5MB TAPG
FL4107	64527-102-001	FILTER-CERAMIC TRAP;TPS 6.5MB TAPG
FL4108	64527-103-001	FILTER CERAMIC;SFE 5.5MB TAPG
FL4109	B1243-0046	FILTER-CERAMIC;DS 5.5M CDA5.5ME21 TAPG
IC4101	62119-103-721	IC;LA7545
L4101	62427-812-229	COIL-PEAKING;EL0606RA 2.2uH-K
L4102	62427-020-101	COIL PEAKING.AXIAL;LAL02TB 101J TAPG
L4103	62427-812-100	COIL-PEAKING;EL0606RA 10uH-J
L4104	62427-812-270	COIL-PEAKING;EL0606RA 27uH-J
L4105	62427-812-220	COIL-PEAKING;EL0606RA 22uH-J
L4106	62427-812-220	COIL-PEAKING;EL0606RA 22uH-J
Q4101	62137-702-010	TRANSISTOR;KTC 3197-AT(TAPG)
Q4102	62137-302-740	TRANSISTOR;KSC 945-Y TAPG
R4102	61079-919-220	R-CHIP RES G;QR RD 2A 2BY 22-J
R4103	61079-919-101	M-CHIP RES G;QR RD 2A 2BY 100-J
R4104	61079-919-122	M-CHIP RES G;QR RD 2A 2BY 1.2K-J
R4105	61079-919-562	M-CHIP RES G;QR RD 2A 2BY 5.6K-J
R4106	61079-919-829	M-CHIP RES G;QR RD 2A 2BY 82-J
R4107	61079-919-681	M-CHIP RES G;QR RD 2A 2BY 680-J
R4108	61079-919-331	M-CHIP RES G;QR RD 2A 2BY 330-J
R4109	61079-919-472	M-CHIP RES G;QR RD 2A 2BY 4.7K-J
R4110	61079-919-152	M-CHIP RES G;QR RD 2A 2BY 1.5K-J
R4111	61079-919-221	M-CHIP RES G;QR RD 2A 2BY 220-J
R4112	61079-919-102	M-CHIP RES G;QR RD 2A 2BY 1K-J
R4113	61079-919-272	M-CHIP RES G;QR RD 2A 2BY 2.7K-J
R4114	61079-919-151	M-CHIP RES G;QR RD 2A 2BY 150-J
R4115	61079-919-151	M-CHIP RES G;QR RD 2A 2BY 150-J
R4116	61079-919-561	M-CHIP RES G;QR RD 2A 2BY 560-J
R4117	61048-177-562	R-METAL FILM;RM 1/8TS 5.6K-J
R4118	61079-919-224	M-CHIP RES G;QR RD 2A 2BY 220K-J
R4119	61079-919-472	M-CHIP RES G;QR RD 2A 2BY 4.7K-J
R4120	61079-919-333	M-CHIP RES G;QR RD 2A 2BY 33K-J
R4121	61079-919-562	M-CHIP RES G;QR RD 2A 2BY 5.6K-J
R4122	61079-919-000	M-CHIP RES G;QR RD 2A 2BY 0A-J(JUMPER)

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606	69227-302-201	ASSY VPS;X-3 PAL (VR4633/VR4632)
C4301	61454-239-474	M-CHIP CAP;RL UX 050 B 50V 470-K
C4302	61454-239-107	M-CHIP CAP;RL UX 050 B 0.001-K
C4303	61507-121-430	C-POLYESTER;CQ921M TAPG 100V 472-K
C4304	A1102-0148	C-FILM;CF 922 P 100V T 104-J /C-M 365 26104/3E
C4305	61454-239-103	M-CHIP CAP;RL EX 050 Y 103N
C4306	61637-205-470	C-ELEC;CEAP 25V 47M SA(6X11)
C4307	61507-121-470	C-POLYESTER;CQ921M TAPG 100V 103-K
C4308	61507-121-530	C-POLYESTER;CQ921M TAPG 100V 333-K
CN4301	A6010-0375	CONNECTOR-WAFER;5097-06J WHT
IC4301	62119-403-013	IC;SAA4700(VPS)
L4301	62429-833-101	COIL-PEAKING AXIAL;BAL04ST 101K
R4301	61079-919-621	M-CHIP RES G;QR RD 2A 2BY 620-J
R4302	61079-919-103	M-CHIP RES G;QR RD 2A 2BY 10K-J
R4303	61079-919-103	M-CHIP RES G;QR RD 2A 2BY 10K-J
R4304	61079-919-103	M-CHIP RES G;QR RD 2A 2BY 10K-J
R4305	61079-919-103	M-CHIP RES G;QR RD 2A 2BY 10K-J
R4306	61079-919-823	M-CHIP RES G;QR RD 2A 2BY 82K-J
R4307	61079-919-362	M-CHIP RES G;QR RD 2A 2BY 3.6K-J

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607	69277-302-201	ASSY BUFFER;2H'D ONLY (VR4632/VR4631)
C3801	61637-204-220	C-ELEC;CEAP 16V 22M SA
C3802	61637-204-470	C-ELEC;CEAP 16V 47M SA(5X11)
C3803	61407-117-104	C-CERAMIC.AXIAL;CAX Y TAPG 16V 0.01-N
CN3801	A6010-0376	CONNECTOR-WAFER;5097-07J WHT
Q3801	62137-302-740	TRANSISTOR;KSC 945-Y TAPG
R3801	61048-177-473	R-METAL FILM;RM 1/8TS 47K-J
R3802	61048-177-563	R-METAL FILM;RM 1/8TS 56K-J
R3803	61048-177-102	R-METAL FILM;RM 1/8TS 1K-J

LOCA.NO	PART-NUMBER	DESCRIPTION,SPECIFICATION
650	69212-302-205	ASSY PRE AMP;4H'D (VR4633)
C3101	61407-101-160	C-CERAMIC.TEMP;CC45 SL TAPG 50V 15-J
C3102	61407-105-680	C-CERAMIC.TEMP;CC45 CH TAPG 50V 200-J
C3103	61407-117-104	C-CERAMIC.AXIAL;CAX Y TAPG 16V 0.01-N
C3104	61407-117-104	C-CERAMIC.AXIAL;CAX Y TAPG 16V 0.01-N
C3105	61407-117-104	C-CERAMIC.AXIAL;CAX Y TAPG 16V 0.01-N
C3106	61407-117-101	C-CERAMIC.AXIAL;UP050F 104Z
C3107	61407-117-104	C-CERAMIC.AXIAL;CAX Y TAPG 16V 0.01-N
C3108	61407-117-104	C-CERAMIC.AXIAL;CAX Y TAPG 16V 0.01-N
C3109	61407-117-104	C-CERAMIC.AXIAL;CAX Y TAPG 16V 0.01-N
C3110	61407-105-330	C-CERAMIC.TEMP;CC45 CH TAPG 50V 33-J
C3111	61407-101-420	C-CERAMIC.TEMP;CC45 SL TAPG 50V 180-J
C3112	61407-105-300	C-CERAMIC.TEMP;CC45 CH TAPG 50V 68-J
C3113	61407-105-350	C-CERAMIC TEMP;CC45 CH TAPG 50V 30-J
C3114	61417-109-040	C-CERAMIC.HK;CK45F TAPG 50V 102-Z
C3115	61407-105-860	C-CERAMIC.TEMP;CC45 CH TAPG 50V 10-D
C3116	61407-117-104	C-CERAMIC.AXIAL;CAX Y TAPG 16V 0.01-N
C3117	61407-117-104	C-CERAMIC.AXIAL;CAX Y TAPG 16V 0.01-N
C3118	61407-117-228	C-CERAMIC.AXIAL;CK OA F 25V 223Z/F 25V 203ZT
C3119	61407-101-480	C-CERAMIC.TEMP;CC45 SL TAPG 50V 330-J
C3120	61407-101-230	C-CERAMIC.TEMP;CC45 SL TAPG 50V 27-J
C3122	61407-117-104	C-CERAMIC.AXIAL;CAX Y TAPG 16V 0.01-N
C3123	61637-504-101	C-ELEC;CEAP 16V 100M SG(6.3X11)
C3124	61407-117-104	C-CERAMIC.AXIAL;CAX Y TAPG 16V 0.01-N
C3125	61407-117-104	C-CERAMIC.AXIAL;CAX Y TAPG 16V 0.01-N
C3126	61407-117-101	C-CERAMIC.AXIAL;UP050F 104Z
C3127	61407-117-101	C-CERAMIC.AXIAL;UP050F 104Z
C3128	61407-117-101	C-CERAMIC.AXIAL;UP050F 104Z
C3130	61407-117-101	C-CERAMIC.AXIAL;UP050F 104Z
C3135	61407-101-440	C-CERAMIC.TEMP;CC45 SL TAPG 50V 220-J
C3136	61407-101-730	C-CERAMIC.TEMP;CC45 SL TAPG 50V 150-K
C3137	61637-204-470	C-ELEC;CEAP 16V 47M SA(5X11)
CN3101	63348-231-080	CONNECTOR-WAFER;52045-0810
CN3102	63349-604-230	CONNECTOR WAFER;53014-1310
D3101	62169-406-482	DIODE;1N4148 SAMSUNG
D3102	62169-406-482	DIODE;1N4148 SAMSUNG
IC3101	62119-103-728	IC;LA7372(PREAMP)
L3101	62427-020-270	COIL PEAKING.AXIAL;LAL02TB 270J TAPG
L3102	62427-020-820	COIL PEAKING.AXIAL;LAL02TB 820J TAPG
L3103	62427-020-220	COIL PEAKING.AXIAL;LAL02TB 220J TAPG
L3104	62427-020-221	COIL PEAKING.AXIAL;LAL02TB 221J TAPG
L3105	62427-020-181	COIL PEAKING.AXIAL;LAL02TB 181J TAPG
L3106	62427-020-270	COIL PEAKING.AXIAL;LAL02TB 270J TAPG
L3107	62429-833-101	COIL-PEAKING AXIAL;BAL04ST 101K
L3109	62427-020-180	COIL PEAKING.AXIAL;LAL02TB 180J TAPG
L3111	62427-020-560	COIL PEAKING.AXIAL;LAL02TB 560J TAPG
L3113	62427-812-471	COIL-PEAKING;EL0606RA 470uH-J
L3114	62427-812-331	COIL-PEAKING;EL0606RA 330uH-J
L3115	62429-833-101	COIL-PEAKING AXIAL;BAL04ST 101K
Q3101	62137-302-740	TRANSISTOR;KSC 945-Y TAPG
Q3102	62137-302-740	TRANSISTOR;KSC 945-Y TAPG
Q3103	62137-302-740	TRANSISTOR;KSC 945-Y TAPG
Q3104	62137-103-380	TRANSISTOR;KSA 733-Y TAPG
R3101	61048-177-102	R-METAL FILM;RM 1/8TS 1K-J
R3102	61048-177-221	R-METAL FILM;RM 1/8TS 220-J
R3103	61048-177-681	R-METAL FILM;RM 1/8TS 680-J
R3104	61048-177-271	R-METAL FILM;RM 1/8TS 270-J
R3105	61048-177-333	R-METAL FILM;RM 1/8TS 33K-J
R3106	61048-177-333	R-METAL FILM;RM 1/8TS 33K-J
R3107	61048-177-152	R-METAL FILM;RM 1/8TS 1.5K-J
R3108	61048-177-202	R-METAL FILM;RM 1/8TS 2K-J
R3109	61048-177-392	R-METAL FILM;RM 1/8TS 3.9K-J
R3110	61048-177-122	R-METAL FILM;RM 1/8TS 1.2K-J
R3111	61048-177-331	R-METAL FILM;RM 1/8TS 330-J
R3112	61048-177-561	R-METAL FILM;RM 1/8TS 560-J
R3113	61048-177-222	R-METAL FILM;RM 1/8TS 2.2K-J
R3114	61048-177-562	R-METAL FILM;RM 1/8TS 5.6K-J
R3115	61048-177-391	R-METAL FILM;RM 1/8TS 390-J
R3116	61048-177-391	R-METAL FILM;RM 1/8TS 390-J
R3117	61048-177-222	R-METAL FILM;RM 1/8TS 2.2K-J
R3118	61048-177-222	R-METAL FILM;RM 1/8TS 2.2K-J
R3119	61048-177-152	R-METAL FILM;RM 1/8TS 1.5K-J
R3120	61048-177-561	R-METAL FILM;RM 1/8TS 560-J
R3123	61048-177-102	R-METAL FILM;RM 1/8TS 1K-J
R3124	61048-177-102	R-METAL FILM;RM 1/8TS 1K-J
R3125	61048-177-102	R-METAL FILM;RM 1/8TS 1K-J
R3127	61048-177-203	R-METAL FILM;RM 1/8TS 20K-J
R3128	61048-177-203	R-METAL FILM;RM 1/8TS 20K-J
R3129	61048-177-622	R-METAL FILM;RM 1/8TS 6.2K-J
R3130	61048-177-622	R-METAL FILM;RM 1/8TS 6.2K-J
R3131	61048-177-203	R-METAL FILM;RM 1/8TS 20K-J
R3132	61048-177-303	R-METAL FILM;RM 1/8TS 30K-J
R3133	61048-177-102	R-METAL FILM;RM 1/8TS 1K-J
R3135	61048-177-102	R-METAL FILM;RM 1/8TS 1K-J
R3146	61048-177-473	R-METAL FILM;RM 1/8TS 47K-J
R3147	61048-177-104	R-METAL FILM;RM 1/8TS 100K-J

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650	69212-302-204	ASSY PRE AMP;2H'D (VR4632/VR4631)
C3101	61407-105-160	C-CERAMIC.TEMP;CC45 CH TAPG 50V 18-J
C3102	61407-105-680	C-CERAMIC.TEMP;CC45 CH TAPG 50V 200-J
C3103	61407-117-104	C-CERAMIC.AXIAL;CAX Y TAPG 16V 0.01-N
C3104	61407-117-104	C-CERAMIC.AXIAL;CAX Y TAPG 16V 0.01-N
C3106	61407-117-101	C-CERAMIC.AXIAL;UP050F 104Z
C3107	61407-117-104	C-CERAMIC.AXIAL;CAX Y TAPG 16V 0.01-N
C3108	61407-117-104	C-CERAMIC.AXIAL;CAX Y TAPG 16V 0.01-N
C3109	61407-117-104	C-CERAMIC.AXIAL;CAX Y TAPG 16V 0.01-N
C3110	61407-105-330	C-CERAMIC.TEMP;CC45 CH TAPG 50V 33-J
C3111	61407-101-420	C-CERAMIC.TEMP;CC45 SL TAPG 50V 180-J
C3112	61407-101-482	C-CERAMIC.TEMP;CC45 SL TAPG 50V 75-J
C3113	61407-105-350	C-CERAMIC TEMP;CC45 CH TAPG 50V 30-J
C3115	61407-105-860	C-CERAMIC.TEMP;CC45 CH TAPG 50V 10-D
C3116	61407-117-104	C-CERAMIC.AXIAL;CAX Y TAPG 16V 0.01-N
C3117	61407-117-104	C-CERAMIC.AXIAL;CAX Y TAPG 16V 0.01-N
C3118	61407-117-228	C-CERAMIC.AXIAL;CK OA F 25V 223Z/F 25V 203ZT
C3119	61407-101-480	C-CERAMIC.TEMP;CC45 SL TAPG 50V 330-J
C3120	61407-117-270	C-CERAMIC AXIAL;CK OA B 50V 271K/B 50V 271KT
C3122	61407-117-104	C-CERAMIC.AXIAL;CAX Y TAPG 16V 0.01-N
C3123	61617-404-470	C-ELEC;CEAP 16V 47M RSS(6.3X7)
C3125	61407-117-104	C-CERAMIC.AXIAL;CAX Y TAPG 16V 0.01-N
C3126	61407-117-101	C-CERAMIC.AXIAL;UP050F 104Z
C3130	61407-117-101	C-CERAMIC.AXIAL;UP050F 104Z
C3135	61407-101-440	C-CERAMIC.TEMP;CC45 SL TAPG 50V 220-J
C3136	61407-117-154	C-CERAMIC.AXIAL;CAX B TAPG 50V 150-K
C3137	61637-204-470	C-ELEC;CEAP 16V 47M SA(5X11)
C3140	61407-117-150	C-CERAMIC.AXIAL;CAX SL TAPG 50V 15-J
CN3101	63348-231-040	CONNECTOR-WAFER;52045-0410
CN3102	63349-604-210	CONNECTOR WAFER;53014-1110
D3101	62169-406-482	DIODE;1N4148 SAMSUNG
IC3101	62119-103-727	IC;LA7376(PREAMP)
L3101	62427-020-330	COIL PEAKING.AXIAL;LAL02TB 330J TAPG
L3102	62427-020-820	COIL PEAKING.AXIAL;LAL02TB 820J TAPG
L3103	62427-020-220	COIL PEAKING.AXIAL;LAL02TB 220J TAPG
L3104	62427-020-221	COIL PEAKING.AXIAL;LAL02TB 221J TAPG
L3105	62427-020-181	COIL PEAKING.AXIAL;LAL02TB 181J TAPG
L3106	62427-020-270	COIL PEAKING.AXIAL;LAL02TB 270J TAPG
L3107	62427-020-101	COIL PEAKING.AXIAL;LAL02TB 101J TAPG
L3109	62427-020-180	COIL PEAKING.AXIAL;LAL02TB 180J TAPG
L3111	62427-020-560	COIL PEAKING.AXIAL;LAL02TB 560J TAPG
L3113	62427-812-471	COIL-PEAKING;EL0606RA 470uH-J
L3114	62427-812-331	COIL-PEAKING;EL0606RA 330uH-J
L3115	62427-020-101	COIL PEAKING.AXIAL;LAL02TB 101J TAPG
Q3101	62137-302-740	TRANSISTOR;KSC 945-Y TAPG
Q3102	62137-302-740	TRANSISTOR;KSC 945-Y TAPG
Q3103	62137-302-740	TRANSISTOR;KSC 945-Y TAPG
Q3104	62137-103-380	TRANSISTOR;KSA 733-Y TAPG
R3101	61048-177-102	R-METAL FILM;RM 1/8TS 1K-J
R3102	61048-177-221	R-METAL FILM;RM 1/8TS 220-J
R3103	61048-177-511	R-METAL FILM;RM 1/8TS 510-J
R3104	61048-177-391	R-METAL FILM;RM 1/8TS 390-J
R3105	61048-177-333	R-METAL FILM;RM 1/8TS 33K-J

LOCA.NO	PART-NUMBER	DESCRIPTION;SPECIFICATION
R3106	61048-177-333	R-METAL FILM;RM 1/8TS 33K-J
R3107	61048-177-152	R-METAL FILM;RM 1/8TS 1.5K-J
R3108	61048-177-202	R-METAL FILM;RM 1/8TS 2K-J
R3109	61048-177-392	R-METAL FILM;RM 1/8TS 3.9K-J
R3110	61048-177-122	R-METAL FILM;RM 1/8TS 1.2K-J
R3111	61048-177-331	R-METAL FILM;RM 1/8TS 330-J
R3112	61048-177-561	R-METAL FILM;RM 1/8TS 560-J
R3113	61048-177-222	R-METAL FILM;RM 1/8TS 2.2K-J
R3114	61048-177-562	R-METAL FILM;RM 1/8TS 5.6K-J
R3115	61048-177-391	R-METAL FILM;RM 1/8TS 390-J
R3116	61048-177-391	R-METAL FILM;RM 1/8TS 390-J
R3117	61048-177-222	R-METAL FILM;RM 1/8TS 2.2K-J
R3118	61048-177-222	R-METAL FILM;RM 1/8TS 2.2K-J
R3119	61048-177-152	R-METAL FILM;RM 1/8TS 1.5K-J
R3120	61048-177-561	R-METAL FILM;RM 1/8TS 560-J
R3124	61048-177-102	R-METAL FILM;RM 1/8TS 1K-J
R3125	61048-177-102	R-METAL FILM;RM 1/8TS 1K-J
R3127	61048-177-153	R-METAL FILM;RM 1/8TS 15K-J
R3128	61048-177-333	R-METAL FILM;RM 1/8TS 33K-J
R3129	61048-177-622	R-METAL FILM;RM 1/8TS 6.2K-J
R3132	61048-177-333	R-METAL FILM;RM 1/8TS 33K-J
R3133	61048-177-102	R-METAL FILM;RM 1/8TS 1K-J
R3135	61048-177-102	R-METAL FILM;RM 1/8TS 1K-J
R3147	61048-177-682	R-METAL FILM;RM 1/8TS 6.8K-J

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B267	69000-291-023	DECK JOINT ASSY;X-3(V2)
C6201	61407-117-104	C-CERAMIC.AXIAL;CAX Y TAPG 16V 0.01-N
C6202	61407-117-104	C-CERAMIC.AXIAL;CAX Y TAPG 16V 0.01-N
C6203	61407-117-101	C-CERAMIC.AXIAL;UP050F 104Z
CN6201	63349-083-392	FFC CONNECTOR WAFER;HELM22R-1/52044-2210
CN6202	63349-603-030	CONNECTOR-WAFER;53015-0310
CN6203	63053-916-391	LEAD CONNECTOR ASSY;9073-9 1429 #26 50mm
CN6204	63053-916-390	LEAD CONNECTOR ASSY;9073-6 1429 #26 190mm
IC6201	62119-103-712	IC;TC4021BP
Q6201	62137-302-740	TRANSISTOR;KSC 945-Y TAPG
R6201	61048-177-391	R-METAL FILM;RM 1/8TS 390-J
R6202	61048-177-224	R-METAL FILM;RM 1/8TS 220K-J
R6203	61048-177-104	R-METAL FILM;RM 1/8TS 100K-J
R6204	61048-177-393	R-METAL FILM;RM 1/8TS 39K-J
R6205	61048-177-303	R-METAL FILM;RM 1/8TS 30K-J
R6206	61048-177-151	R-METAL FILM;RM 1/8TS 150-J
R6207	61048-177-151	R-METAL FILM;RM 1/8TS 150-J
R6208	61048-177-333	R-METAL FILM;RM 1/8TS 33K-J
R6209	61048-177-103	R-METAL FILM;RM 1/8TS 10K-J
R6210	61048-177-103	R-METAL FILM;RM 1/8TS 10K-J
R6211	61048-177-103	R-METAL FILM;RM 1/8TS 10K-J
R6212	61048-177-103	R-METAL FILM;RM 1/8TS 10K-J
R6213	61048-177-103	R-METAL FILM;RM 1/8TS 10K-J
R6214	61048-177-103	R-METAL FILM;RM 1/8TS 10K-J
R6215	61048-177-103	R-METAL FILM;RM 1/8TS 10K-J
R6216	61048-177-103	R-METAL FILM;RM 1/8TS 10K-J
R6217	61048-177-472	R-METAL FILM;RM 1/8TS 4.7K-J
R6218	61048-177-103	R-METAL FILM;RM 1/8TS 10K-J
R6219	61048-177-103	R-METAL FILM;RM 1/8TS 10K-J
R6220	61048-177-181	R-METAL FILM;RM 1/8TS 180-J

LOCA.NO	PART-NUMBER	DESCRIPTION;SPECIFICATION

7. EXPLODED VIEWS

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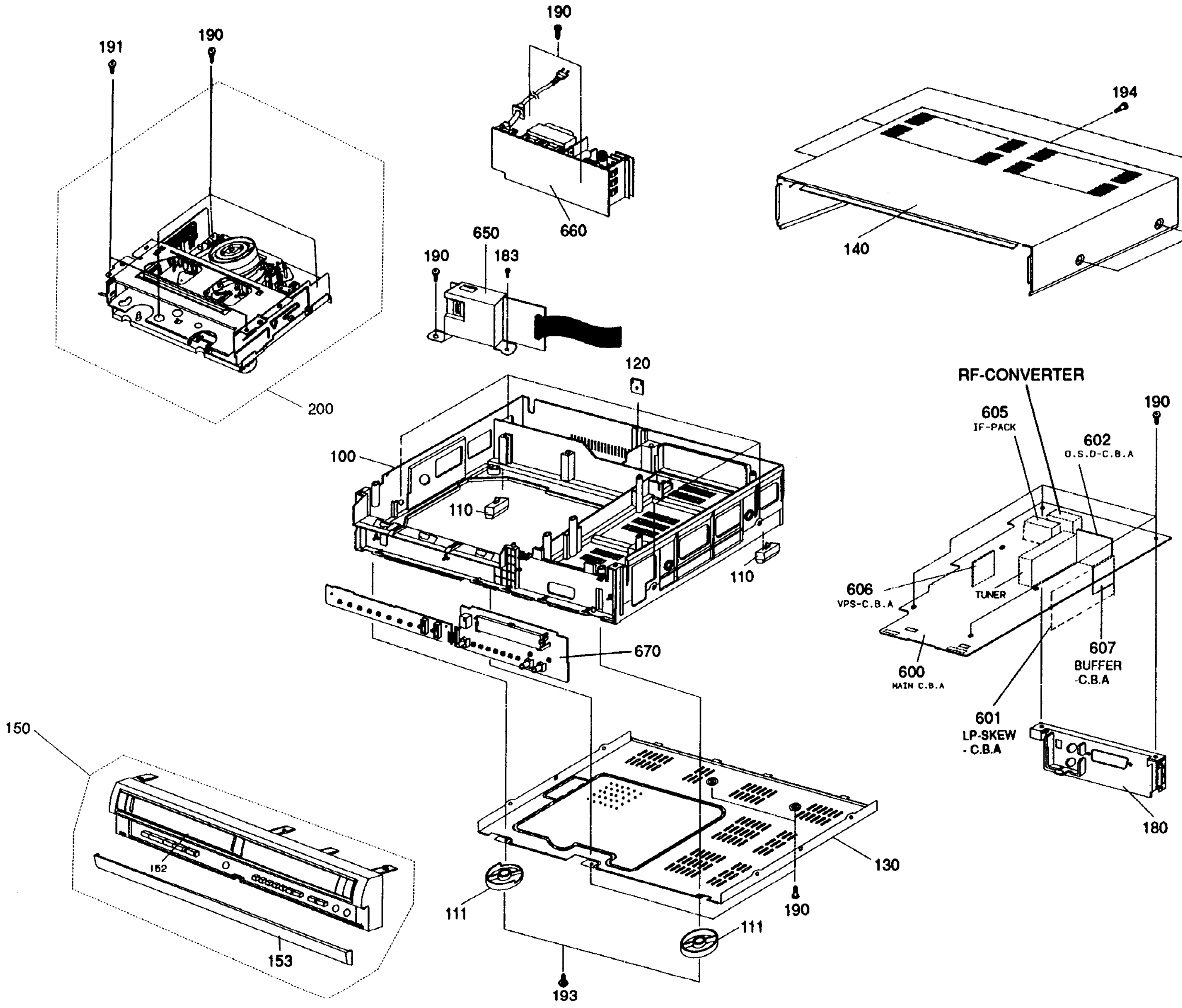
7-3. Bottom Side Mechanism Assembly - - - - - 7-6

7-4. Housing Assembly - - - - - - - - - - - - - - - - - 7-8

7-1. Instrument Assembly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VPS-C.B.A
TUNER
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MAIN C.B.A
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BUFFER
-C.B.A
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LP-SKEW
- C.B.A
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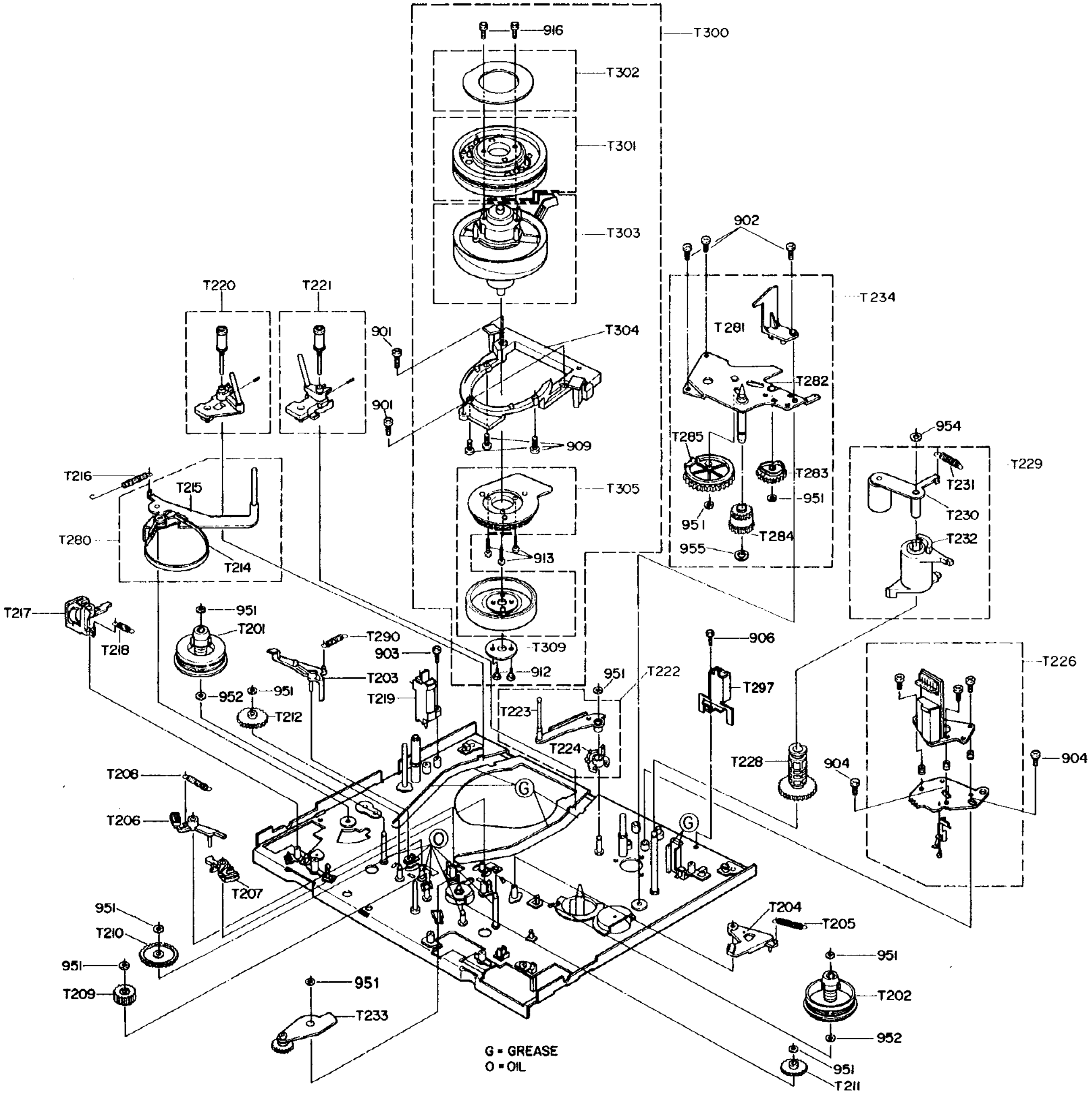
LOCA.NO	PART-NUMBER	DESCRIPTION;SPECIFICATION
100	V6020-603-410	FRAME;HIPS 94HB LOCAL SESA V-2
110	66074-601-810	LEG;TPE 7705(BLK)
111	69000-201-404	ASSY-LEG V-2;ABS 94-HB+EVA
120	66614-714-310	BRKT-GUIDE TOP S;SPG T1.0
130	V6611-600-610	BOTTOM-COVER;SPG T0.5 LOCAL V-2
140	V6001-600-710	TOP-CABINET;FE+PVC T0.75 LOCAL V-2
150	69000-203-243	ASSY-PANEL FRONT; (VR4633)
	69000-203-242	ASSY-PANEL FRONT; (VR4632)
	69000-203-241	ASSY-PANEL FRONT; (VR4631)
152	64042-0037-00	DOOR-HOUSING;ABS94HB (VR4633)
	64042-0037-04	DOOR-HOUSING;ABS94HB (VR4632/VR4631)
153	64042-0036-15	DOOR-FRONT;ABS94HB D/GRY (VR4633)
	64042-0036-14	DOOR-FRONT;ABS94HB D/GRY (VR4632)
	64042-0036-13	DOOR-FRONT;ABS94HB D/GRY (VR4631)
180	V6462-607-810	CONNECTOR-BOARD;HIPS 94HB LOCAL SESA V-2
183	67108-330-061	SCREW-PH;M3X6 TAP TITE
190	67158-240-121	SCREW BH;2-4*12 FE FZY
191	67128-521-314	SCREW-TAP TITE BH;2-3X14 FE FZY
193	67158-240-180	SCREW TAP PWH;2-4*16 FE FZY
194	A0102-0033	SCREW-TAP TITE;BH M4 10 SWRCH18A ZPC3 BLK TB
200	DX3A-R	FULL DECK ASSY;PAL V-2 DECK
600		ASSY MAIN
601	69228-302-201	ASSY LP SKEW;X-3 PAL 4H'D (Only for VR4633)
602	69252-302-202	ASSY OSD;X-3 PAL 4H'D(SST)
605	69322-302-213	ASSY IF PACK;X-3 PAL 4H'D FTZ(B/G)
606	69227-302-201	ASSY VPS;X-3 PAL 4H'D (VR4633/VR4632)
607	69277-302-201	ASSY BUFFER;X-3 PAL 2H'D ONLY (VR4632/VR4631)
650	69212-302-205	ASSY PRE AMP;(VR4633)
	69212-302-204	ASSY PRE AMP; (VR4632/VR4631)
660	69098-225-500	REGULATOR ASSY;X3 230V CP2
670	69371-302-252	ASSY F/TIMER; (VR4633)
	69271-302-208	ASSY F/TIMER; (VR4632)
	69271-302-224	ASSY F/TIMER; (VR4631)

7-2. Transport Mechanism Assembly



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G = GREASE
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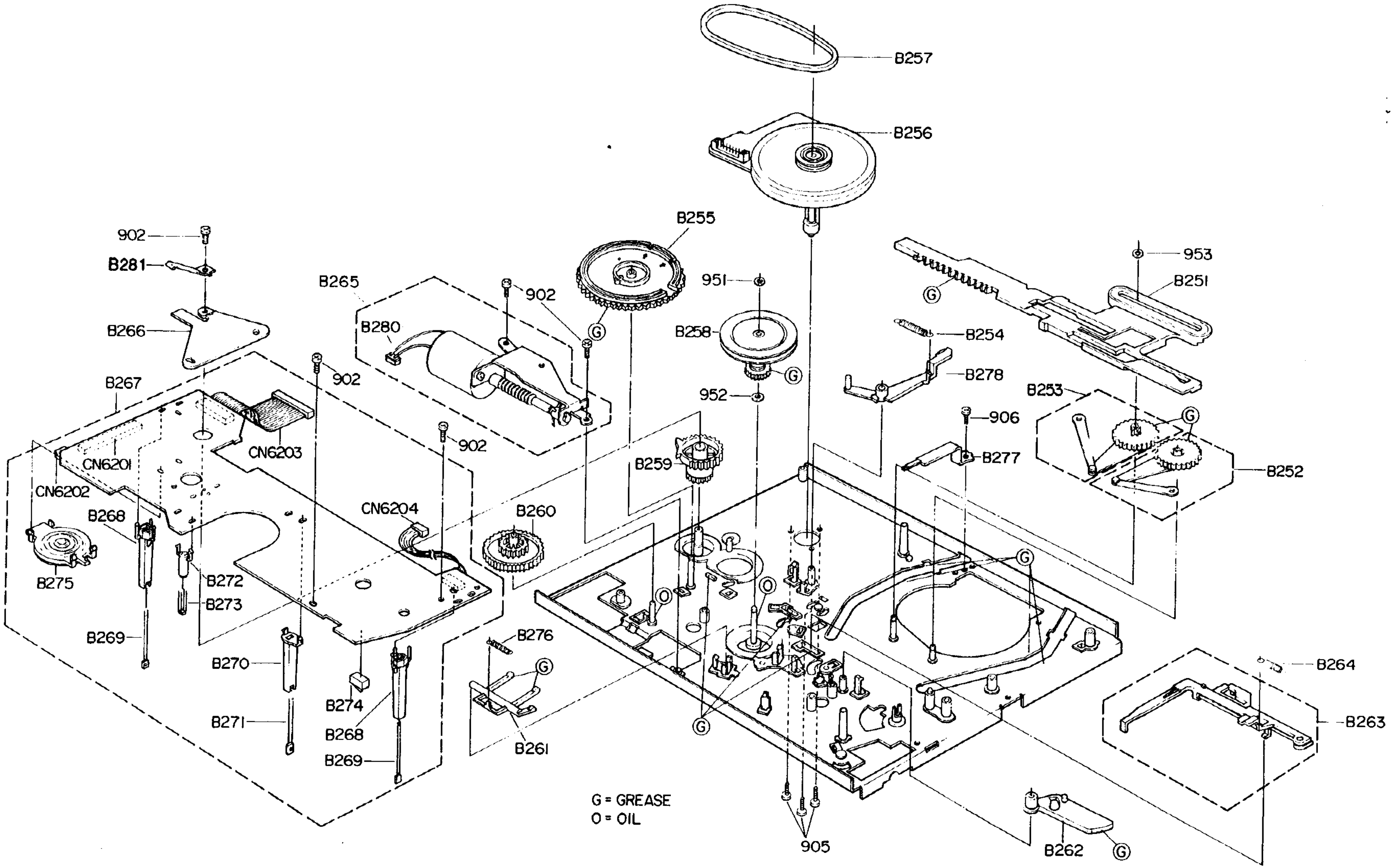
LOCA NO	PART-NUMBER	DESCRIPTION;SPECIFICATION
901	60509-0064-00	SCREW-MACHINE;BH FP M3 L8 FE FZY WS
902	60509-0063-00	SCREW-TAPPING;BH B M3 L8 FE FZY
903	60504-0032-00	SCREW-PH;+M2.6X10 TAPPING
904	60509-0059-00	SCREW-MACHINE;BH FP M2.6 L6 FE FZY WSP
906	60509-0058-00	SCREW-MACHINE;BH FP M3 L4 SWRCH10A YEL
909	67008-126-081	SCREW-PH;+M2.6X8 FE FZY
912	67094-604-710	SCREW-DAMPER;M2.0X7.0 SWCM 10(MFZN2-C)
913	67008-123-101	SCREW-PH;+M2.3X10 FE FZY
916	67004-126-086	SCREW-BH;+M2.6X8 WSZN/70391398
951	67334-600-310	WASHER SLIT;PI2.5XPI5XT0.5
952	67304-103-410	WASHER-PLAIN;3.2X6X0.5 POLYSLIDER
954	60534-0024-00	WASHER SLIT;ID3 OD8 T0.5 POLYSLIDE
955	60534-0019-00	WASHER-SLIT;A ID5 OD9 T0.5 POLYSLIDE
T201	61574-0010-01	REEL DISK(L) ASSY;X3RL03032A
T202	61574-0012-01	REEL DISK(R) ASSY;X3RL 03031A
T203	66603-620-110	BRAKE SUB L;POM(M90-44) NAT
T204	62614-0004-01	BRAKE SUB(R) ASSY;X3RL02021A
T205	66674-652-610	S/P BRAKE SUB
T206	62614-0003-01	BRAKE MAIN(L) ASSY;X3RL02022A
T207	62614-0002-01	BRAKE MAIN(R) ASSY;X3RL02021A
T208	66674-652-510	S/P BRAKE MAIN;SUS304 WPB
T209	61474-0061-01	GEAR RELAY S1;PEBAX #6333
T210	61474-0062-01	GEAR RELAY S2;POM(M90-44) NAT
T211	61474-0060-01	GEAR RELAY T;PEBAX #6333
T212	61474-0063-01	GEAR RELAY S3;PEBAX #6333
T214	62024-0005-01	BAND TENSION ASSY;X3RL04051A
T215	69000-290-579	ARM TENSION ASSY;SECC+SUS
T216	66674-652-910	SPRING TENSION;SUS304
T217	61533-0048-00	LEVER REC S/W;POM M90-44 H9.6 BLK(V2)
T218	62724-0075-00	SPRING-RECORD S/W;ES SUS304 PI0.3 D3.1 L16
T219	64079-700-454	HEAD MAGNETIC F/E;VTR-1X2ERS11-089(X-1)
T220	69000-291-035	ASSY-P.B & G.R(L);X-3
T221	69000-291-036	ASSY-P.B & G.R(R);X-3
T222	69000-291-004	FULL REVIEW ARM ASSY;X-3
T223	61544-0032-00	REVIEW ARM ASSY;SECC+SUS303C+C3604BD
T224	61473-0059-01	GEAR REVIEW;POM(M90-44) NAT
T226	69000-291-003	ASSY-ACE/HD FULL;X-3A
T228	61472-0054-01	GEAR ESCALATOR;POM(M90-44)
T229	61523-0021-01	PINCH ROLLER UNIT;X-3A
T230	61543-0040-01	ARM PINCH ASSY;SECC 1.6+SUS+C3604BD
T231	62724-0062-01	S/P PINCH ROLLER;SUS304-WPB
T232	63323-0043-01	HOLDER ESCALATOR;PC 30%
T233	61604-0003-01	IDLER SUB ASSY;X3RL 06061A
T234	67179-0069-01	UNIT-DRIVE PINCH;X-3
T280	69000-290-560	ASSY FULL ARM TENSION;SECC+SUS+POM+FELT
T281	63073-0015-00	SUPPORTER-LID OPENNER;POM(M90-44) T2 X-3
T282	63012-0098-00	BRKT PINCH DRIVE;SECC T1.0
T283	61473-0058-01	GEAR CAM PINCH;POM(OL-10)
T284	61473-0056-01	GEAR RELAY PINCH;PBT #2002
T285	61473-0057-01	GEAR CAM DRIVE;POM(OL-10)
T290	62724-0101-00	S/P BRAKE SUB
T297	67223-600-220	HOLDER TR ASSY;A1050P+SUS 301CSP
T300	69020-123-002	CYLINDER ASSY;CV2-D4P (4'HD)
	V9019-123-270	CYLINDER ASSY;CV2-S2P(SP)(2'HD)
T301	69000-400-002	UPPER CYLINDER ASS'Y;CV2-D4P(4'HD)
	V9000-400-020	ASSY UPPER CYLINDER;CV2-S2P(SP)(2'HD)
T302	63005-701-075	PWB-UPPER CYLINDER;94V0 47X47X1.0T
T303	69000-400-011	LOWER CYLINDER ASS'Y;CV2-D4P (4'HD)
	69000-390-280	ASSY-LOWER CYLINDER;DX1-S2 (2'HD)
T304	66121-602-410	BASE CYLINDER;ADC12
T305	64769-160-170	MOTOR CYLINDER;DMVDMT 03A(X-1)
T309	66124-601-710	RETAINER-RUBBER ASSY;SECC+SILICONE

7-3. Bottom Side Mechanism Assembly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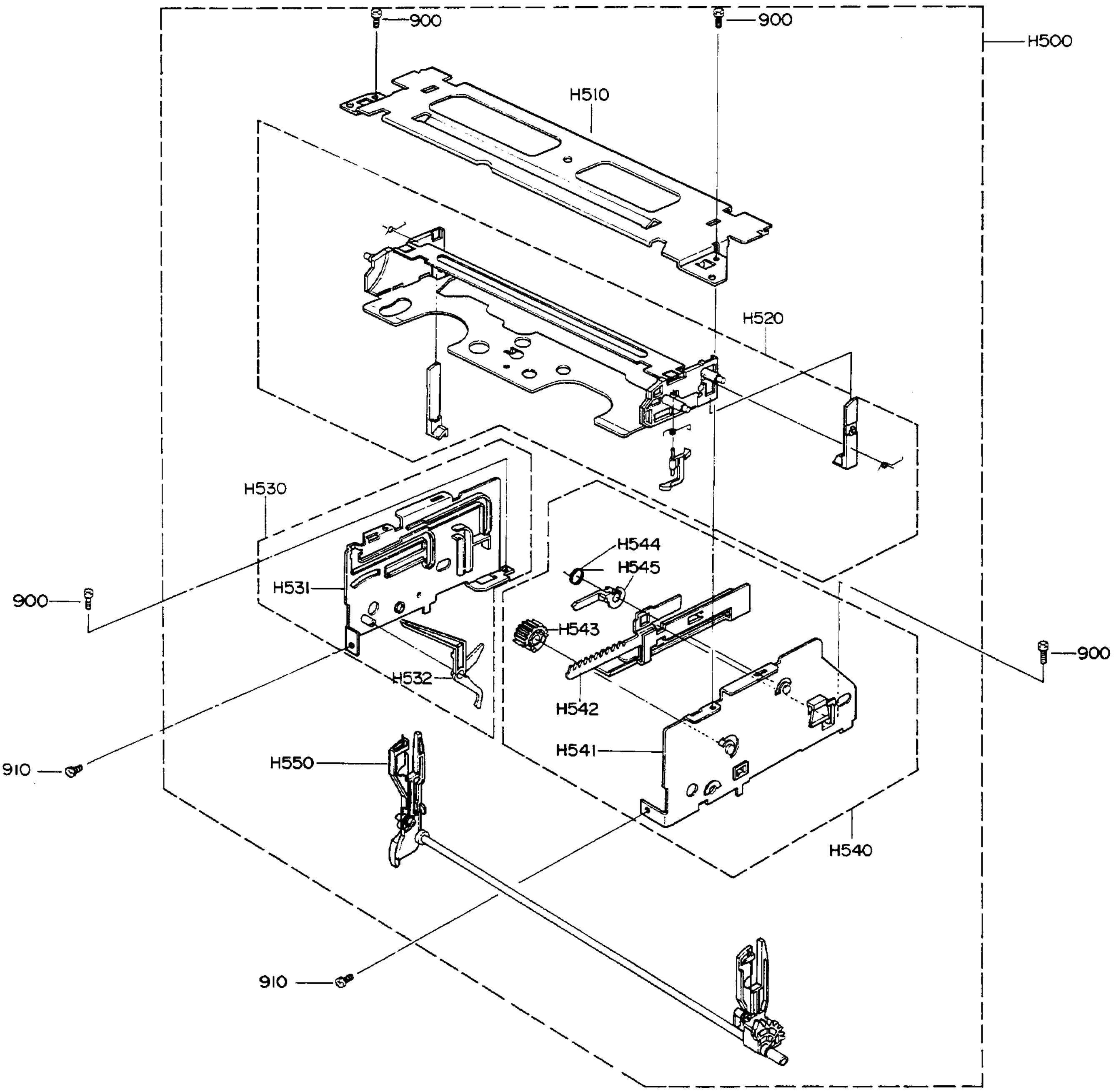
LOCA NO	PART-NUMBER	DESCRIPTION;SPECIFICATION
902	60509-0063-00	SCREW-TAPPING;BH B M3 L8 FE FZY
905	60504-0044-00	SCREW-TAPPING;BH + 3 M2.6 L7.5 SWRCH18A ZPC3
906	60509-0058-00	SCREW-MACHINE;BH FP M3 L4 SWRCH10A YEL ROBOT
951	67334-600-310	WASHER SLIT;PI2.5XPI5XT0.5
952	67304-103-410	WASHER-PLAIN;3.2X6X0.5 POLYSLIDER
953	67334-601-830	WASHER SLIT;PI2.5X9X0.5(RED)
B251	66602-603-510	SLIDE MAIN;PBT 6300T(NAT)
B252	61473-0047-01	GEAR LOADING "L" ASSY;X-3
B253	61473-0045-01	GEAR LODAING "R" ASSY;X-3
B254	66674-652-810	S/P BRAKE CAPSTAN;SUS304 WPB
B255	61472-0055-01	GEAR MASTER;POM(M90-44)
B256	66829-0024-00	MOTOR D/D/ CAPSTAN;DMVCMC05A X-3A
B257	65274-603-910	BELT CAPSTAN;CY-65
B258	61453-0001-01	CLUTCH ASSY;X3RL10101A
B259	61473-0051-01	GEAR E/J DRIVE;PBT #2002
B260	61473-0053-01	GEAR WORM WHEEL;NYLON 66
B261	66603-619-510	LEVER SHIFT;POM(M90-44)
B262	61534-0040-01	LEVER TENSION CONTROL;POM(M90-44) NAT
B263	61643-0016-01	SLIDE I.B ASSY;X3RL02021A
B264	62724-0129-00	SPRING-RELEASE BRAKE;SUS304 WPB
B265	67171-0039-01	L/D UNIT ASSY;X-3A
B266	63013-0065-01	BRKT E/J DRIVE;SECC(T1.2)
B267	69000-291-023	DECK JOINT ASSY;X-3(V2)
B268	63323-0050-00	HOLDER TR;ABS H34.7 BLK(V2)
B269	66219-0010-00	SENSOR-PHOTO TR;PT 493F
B270	63323-0049-00	HOLDER LED;POM M90-44 BLK(V2)
B271	62309-112-043	LED IR;GL-451(SHARP)
B272	63324-0051-00	HOLDER PHOTO INTERRUPTER;POM M90-44 H11.4 WHT
B273	66419-0001-00	PHOTO INTERRUPTER;SG-105LF
B274	66209-0008-00	REC SWITCH;MPU 10100 MMBO
B275	66203-0007-02	PROGRAM S/W;SMR-009-S(K-ALPS)
B276	66674-652-410	SPRING LEVER SHIFT;SUS 304 WPB
B277	63374-0002-00	HEAD BRUSH ASSY;SECC+CARBON
B278	62614-0005-01	BRAKE DD CAP ASSY;X3RL02021A
B280	63053-916-393	LEAD CONNECTOR ASSY;1429 #26 51004 3P 55MM
B281	62654-0008-00	GROUND PLATE TOP;SUS430
CN6201	63349-083-392	FFC CONNECTOR WAFER;HLEM 22R-1
CN6202	63349-603-030	CONNECTOR-WAFER;53015-0310
CN6203	63053-916-391	LEAD CONNECTOR ASSY;9073-9 1429 #26 50mm
CN6204	63053-916-390	LEAD CONNECTOR ASSY;9073-6 1429 #26 190mm

7-4. Housing Assembly



900
900
H500
H510
H520
H530
H531
H532
900
H544
H545
H543
H542
H541
900
910
H550
H540
910

LOCA.NO	PART-NUMBER	DESCRIPTION;SPECIFICATION
900	60509-0061-00	SCREW-MACHINE;BH FP M3 L6 FE FZY
910	60509-0062-00	SCREW-TAP TITE;BH + TS M3 L6 FE FZY
H500	62052-0004-00	F/L HOUSING ASSY;X-3 FL28300A
H510	62202-0029-00	UPPER CHASSIS;SECC E20/20 T1.2
H520	63322-0044-00	CASS HOLDER ASSY;X-3 FL11120A
H530	62203-0027-00	CHASSIS SIDE "L" ASSY;X3FL02020A
H531	62203-0028-00	CHASSIS SIDE "L" OUTSERT;SECC T1.2+LUCEL/KEPITA
H532	61533-0043-00	LEVER DOOR;LUCEL-N109-LD/KEPITAL F20-03
H540	62203-0025-00	CHASSIS SIDE "R" ASSY;X3FL08080A
H541	62203-0026-01	CHASSIS-SIDE "R";SECC T1.2 LVCEL
H542	61474-0080-00	GEAR RACK ASSY;SECC T1.6+SWPB
H543	61473-0064-01	GEAR-JOINT;LUCEL MR-320/KT-20
H544	62724-0067-00	SPRING LEVER DAMPER;SUS304 WPB
H545	61533-0042-00	LEVER DAMPER;LUCEL N109-LD/KEPITAL F20-03
H550	61043-0025-00	SHAFT ARM ASSY;X3FL05050A

8. BLOCK DIAGRAMS

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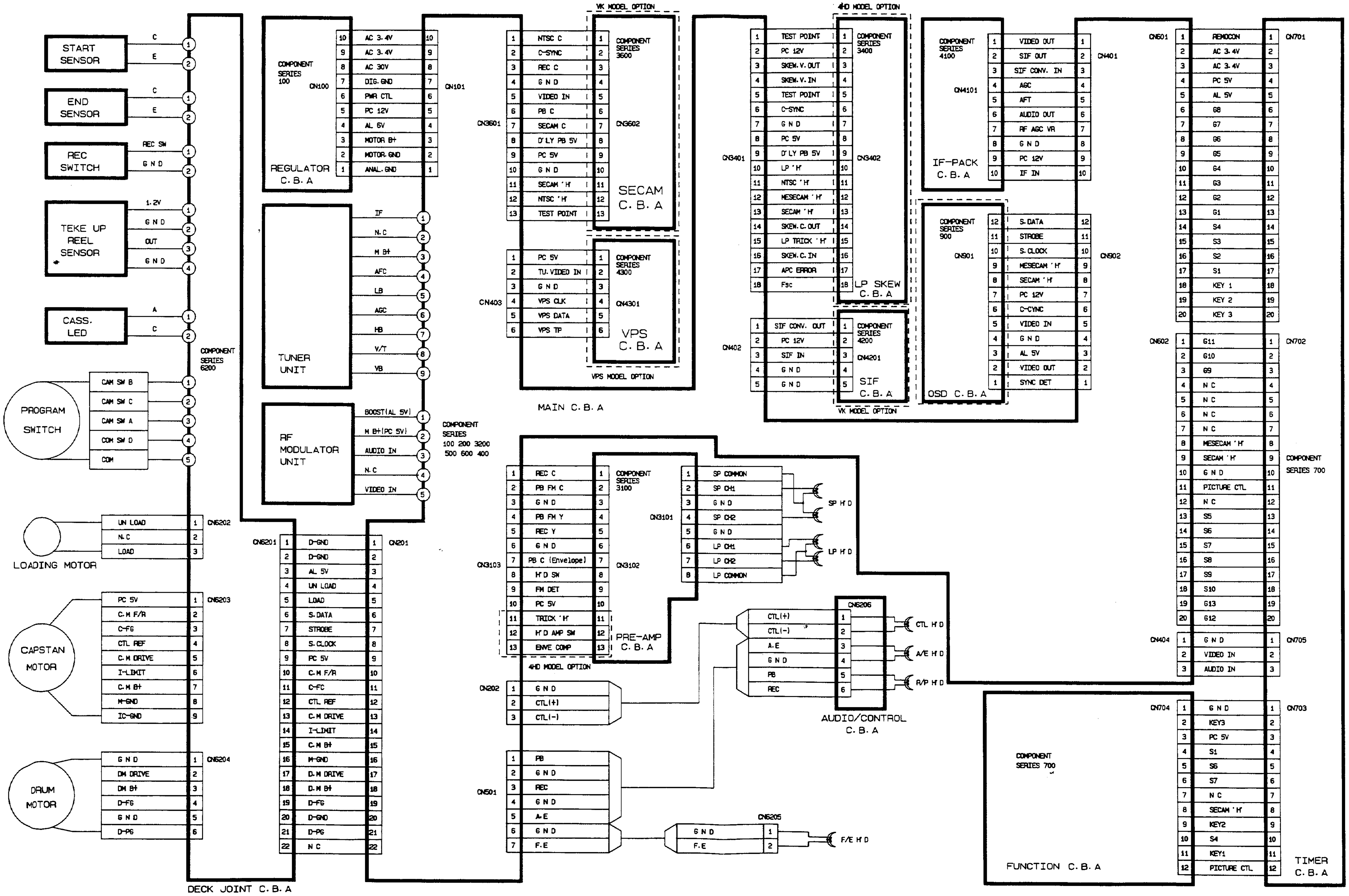
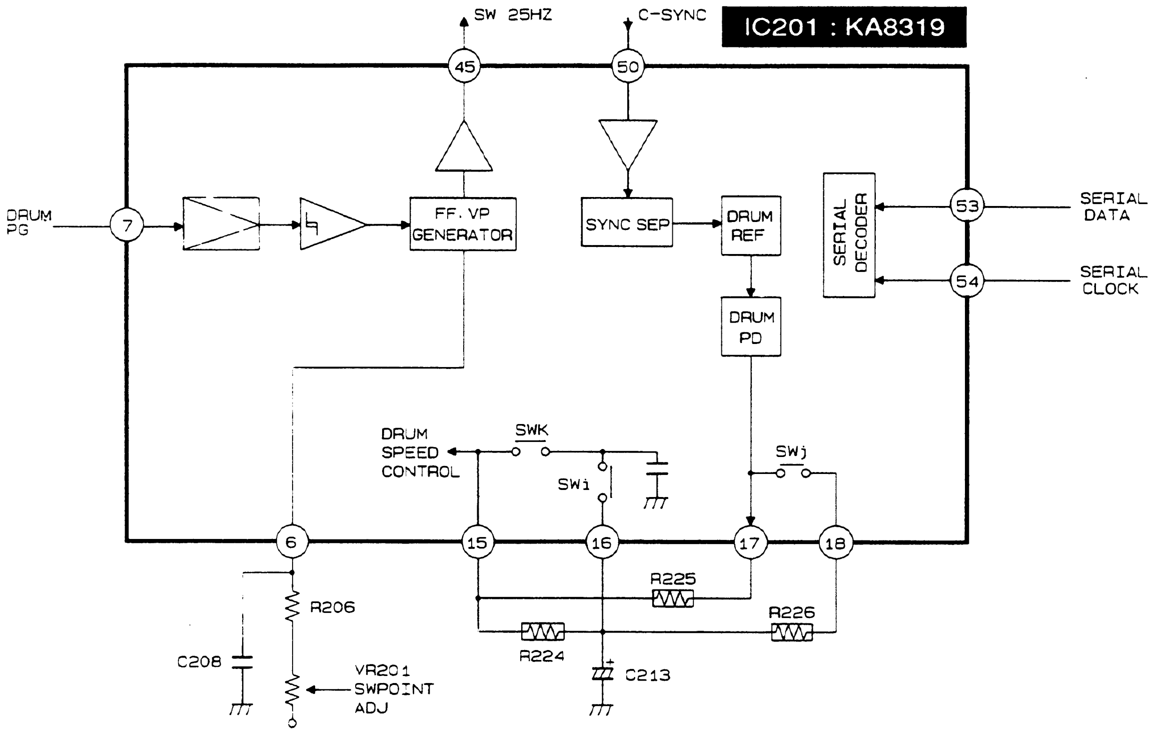
8-1. Total Wiring Diagram

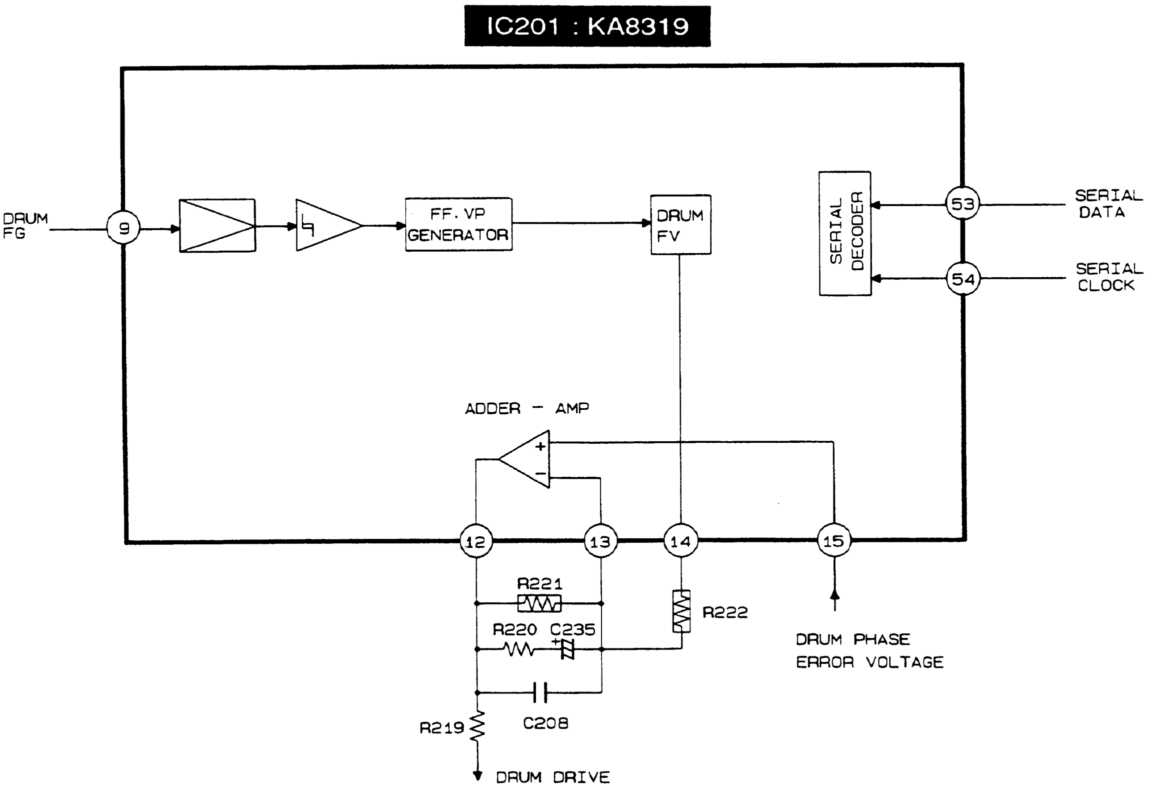


START SENSOR
END SENSOR
REC SWITCH
TEKE UP REEL SENSOR
CASS. LED
PROGRAM SWITCH
LOADING MOTOR
CAPSTAN MOTOR
DRUM MOTOR
DECK JOINT C. B. A
COMPONENT SERIES 6200
REGULATOR C. B. A
COMPONENT SERIES 100
CN100
CN101
AC 3.4V
AC 3.4V
AC 30V
DIG. GND
PWR CTL
PC 12V
AL 6V
MOTOR B+
MOTOR GND
ANAL. GND
TUNER UNIT
IF
N.C
M B+
AFC
LB
AGC
HB
V/T
VB
RF MODULATOR UNIT
BOOST(AL 5V)
M B+(PC 5V)
AUDIO IN
N.C
VIDEO IN
COMPONENT SERIES 100 200 3200 500 600 400
CAM SW B
CAM SW C
CAM SW A
COM SW D
COM
CN6202
UN LOAD
N.C
LOAD
CN6203
PC 5V
C.M F/R
C-FG
CTL REF
C.M DRIVE
I-LIMIT
C.M B+
M-GND
IC-GND
CN6204
GND
DM DRIVE
DM B+
D-FG
GND
D-PG
CN6201
CN201
D-GND
D-GND
AL 5V
UN LOAD
LOAD
S.DATA
STROBE
S.CLOCK
PC 5V
C.M F/R
C-FG
CTL REF
C.M DRIVE
I-LIMIT
C.M B+
M-GND
D.M DRIVE
D.M B+
D-FG
D-GND
D-PG
N C
MAIN C. B. A
CN3601
NTSC C
C-SYNC
REC C
GND
VIDEO IN
PB C
SECAM C
D'LY PB 5V
PC 5V
GND
SECAM 'H'
NTSC 'H'
TEST POINT
VK MODEL OPTION
COMPONENT SERIES 3600
CN3602
SECAM C. B. A
CN403
PC 5V
TU. VIDEO IN
GND
VPS CLK
VPS DATA
VPS TP
COMPONENT SERIES 4300
CN4301
VPS C. B. A
VPS MODEL OPTION
4HD MODEL OPTION
CN3401
TEST POINT
PC 12V
SKEW.V.OUT
SKEW.V.IN
TEST POINT
C-SYNC
GND
PC 5V
D'LY PB 5V
LP 'H'
NTSC 'H'
MESECAM 'H'
SECAM 'H'
SKEW.C.OUT
LP TRICK 'H'
SKEW.C.IN
APC ERROR
Fsc
COMPONENT SERIES 3400
CN3402
LP SKEW C. B. A
CN402
SIF CONV. OUT
PC 12V
SIF IN
GND
GND
COMPONENT SERIES 4200
CN4201
SIF C. B. A
VK MODEL OPTION
COMPONENT SERIES 4100
CN4101
IF-PACK C. B. A
VIDEO OUT
SIF OUT
SIF CONV. IN
AGC
AFT
AUDIO OUT
RF AGC VR
GND
PC 12V
IF IN
CN401
COMPONENT SERIES 900
CN901
OSD C. B. A
S.DATA
STROBE
S.CLOCK
MESECAM 'H'
SECAM 'H'
PC 12V
C-CYNC
VIDEO IN
GND
AL 5V
VIDEO OUT
SYNC DET
CN902
CN501
CN701
REMOCON
AC 3.4V
AC 3.4V
PC 5V
AL 5V
G8
G7
G6
G5
G4
G3
G2
G1
S4
S3
S2
S1
KEY 1
KEY 2
KEY 3
CN502
CN702
G11
G10
G9
N C
N C
N C
N C
MESECAM 'H'
SECAM 'H'
GND
PICTURE CTL
N C
S5
S6
S7
S8
S9
S10
G13
G12
COMPONENT SERIES 700
CN404
CN705
GND
VIDEO IN
AUDIO IN
CN3103
REC C
PB FM C
GND
PB FM Y
REC Y
GND
PB C (Envelope)
H'D SW
FM DET
PC 5V
TRICK 'H'
H'D AMP SW
ENVE COMP
COMPONENT SERIES 3100
CN3101
CN3102
PRE-AMP C. B. A
4HD MODEL OPTION
SP COMMON
SP CH1
GND
SP CH2
GND
LP CH1
LP CH2
LP COMMON
SP H'D
LP H'D
CN5206
CTL(+)
CTL(-)
A.E
GND
PB
REC
CTL H'D
A/E H'D
R/P H'D
AUDIO/CONTROL C. B. A
CN202
GND
CTL(+)
CTL(-)
CN501
PB
GND
REC
GND
A.E
GND
F.E
CN6205
GND
F.E
F/E H'D
CN704
CN703
GND
KEY3
PC 5V
S1
S6
S7
N C
SECAM 'H'
KEY2
S4
KEY1
PICTURE CTL
COMPONENT SERIES 700
FUNCTION C. B. A
TIMER C. B. A

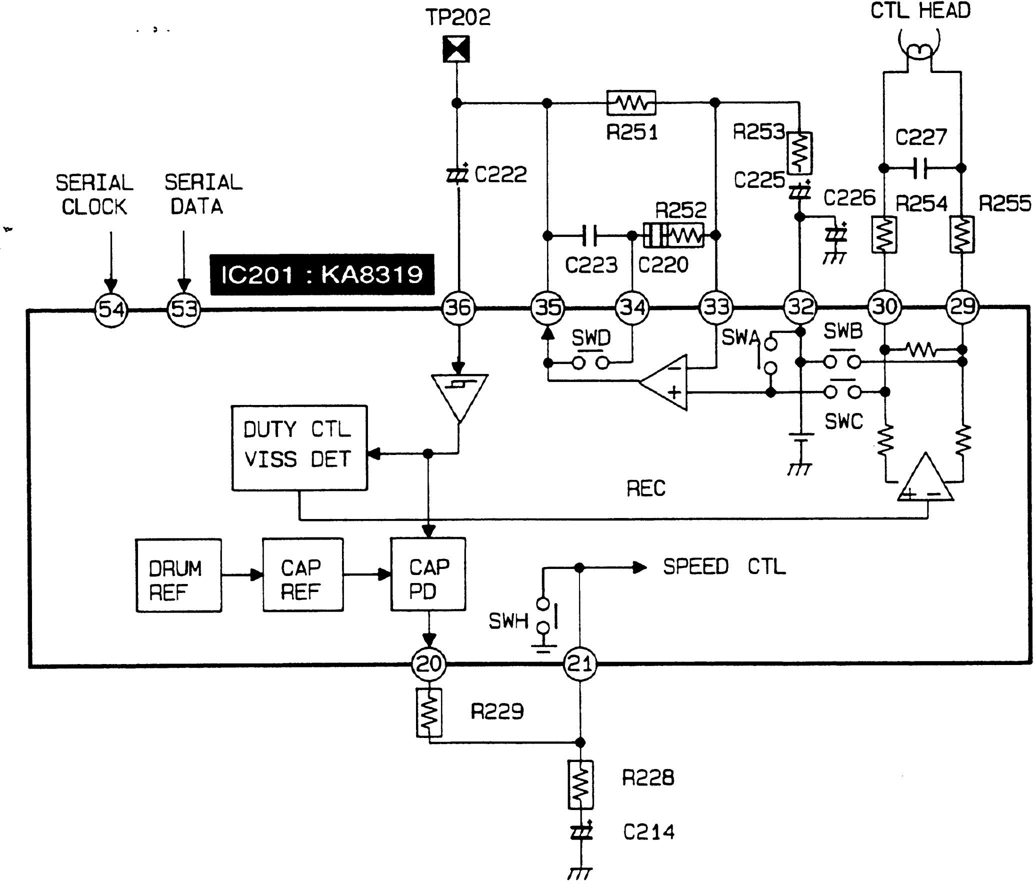
8-2. Drum Phase Control


SW 25HZ
C-SYNC
IC201 : KA8319
45
50
DRUM PG
7
FF. VP GENERATOR
SYNC SEP
DRUM REF
SERIAL DECODER
53
SERIAL DATA
54
SERIAL CLOCK
DRUM PD
DRUM SPEED CONTROL
SWK
SWi
SWj
6
15
16
17
18
R225
R206
R226
R224
C208
VR201 SWPOINT ADJ
C213

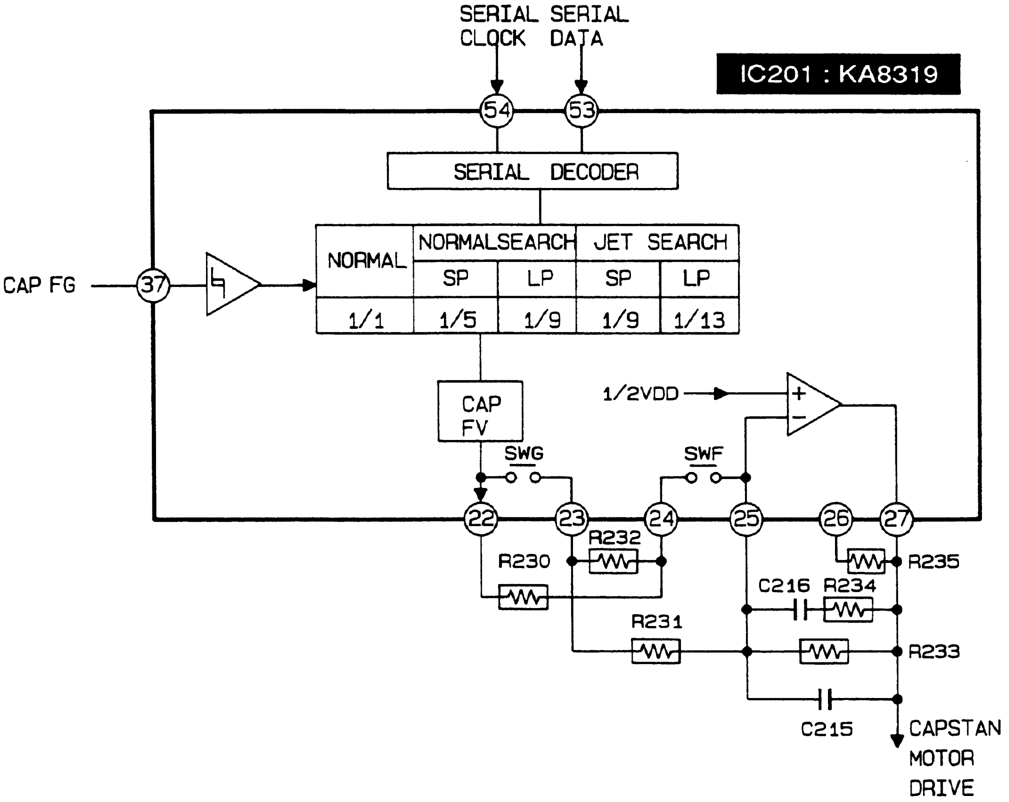
8-3. Drum Speed Control


IC201 : KA8319
DRUM FG
9
FF. VP GENERATOR
DRUM FV
SERIAL DECODER
53
SERIAL DATA
54
SERIAL CLOCK
ADDER - AMP
12
13
14
15
R221
R220
C235
R222
DRUM PHASE ERROR VOLTAGE
R219
C208
DRUM DRIVE

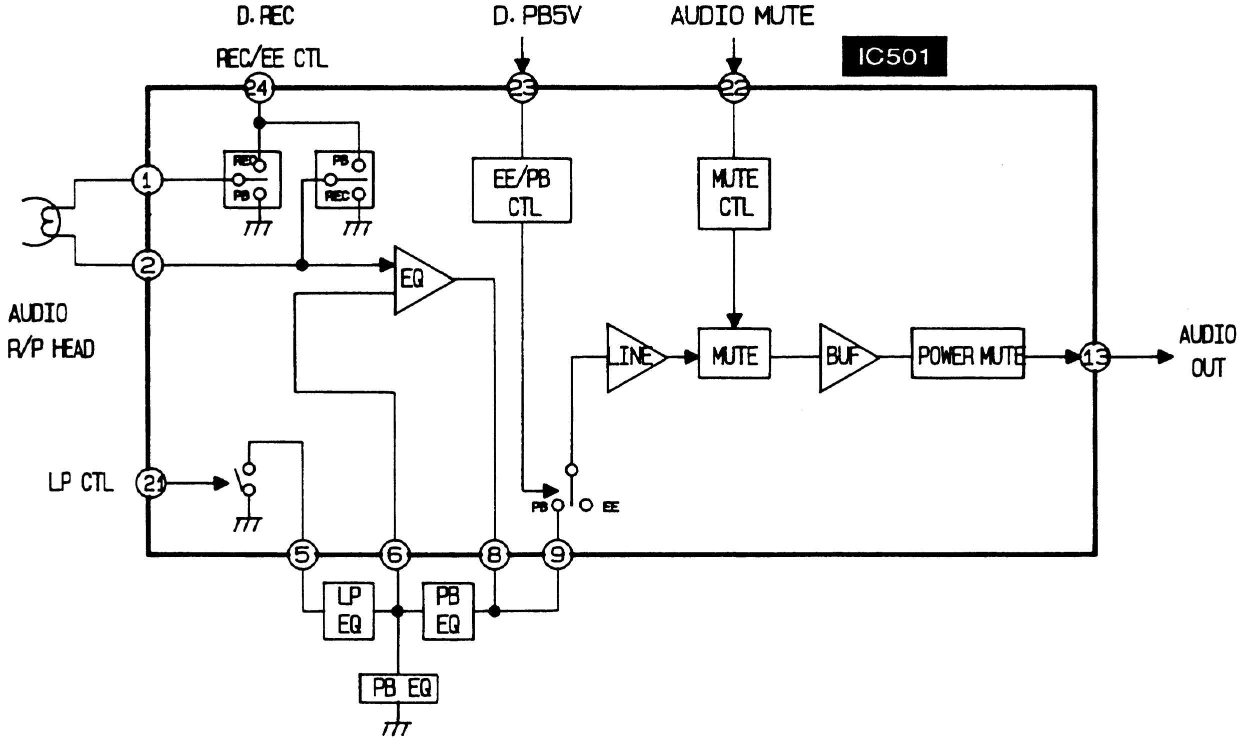
8-4. Capstan Phase Control


TP202
CTL HEAD
R251
R253
C227
C222
C225
C226
R254
R255
SERIAL CLOCK
SERIAL DATA
R252
C223
C220
IC201 : KA8319
54
53
36
35
34
33
32
30
29
SWD
SWA
SWB
SWC
DUTY CTL VISS DET
REC
DRUM REF
CAP REF
CAP PD
SPEED CTL
SWH
20
21
R229
R228
C214

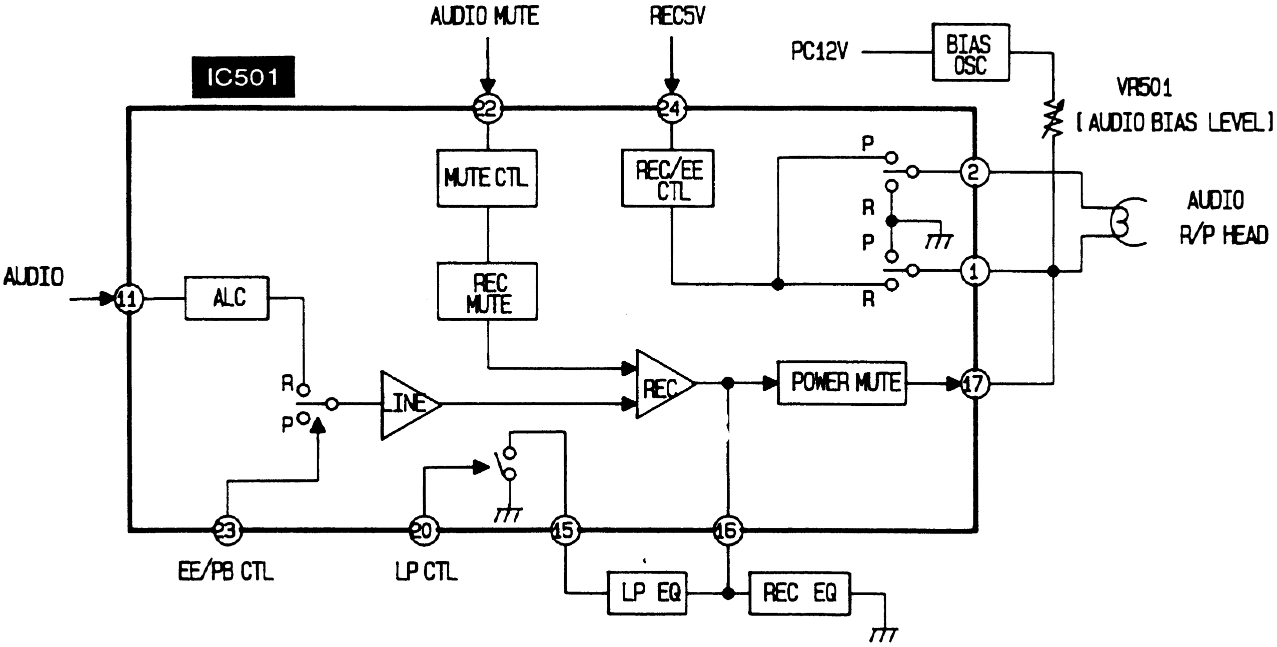
8-5. Capstan Speed Control


SERIAL CLOCK
SERIAL DATA
IC201 : KA8319
54
53
SERIAL DECODER
NORMAL
NORMALSEARCH
JET SEARCH
SP
LP
SP
LP
1/1
1/5
1/9
1/9
1/13
CAP FG
37
CAP FV
1/2VDD
SWG
SWF
22
23
24
25
26
27
R232
R230
R235
C216
R234
R231
R233
C215
CAPSTAN MOTOR DRIVE

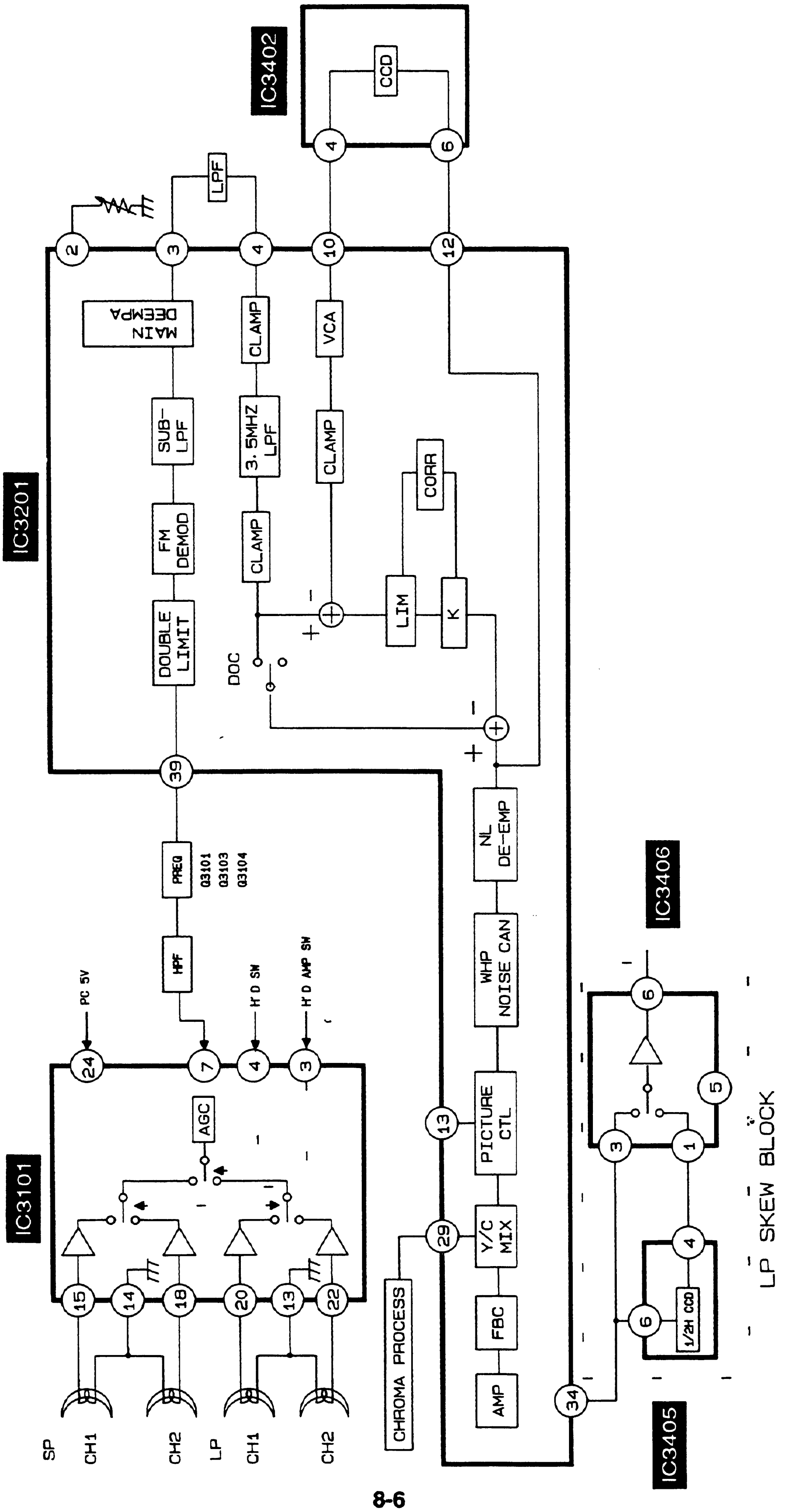
8-6. Audio Playback Process


D. REC
REC/EE CTL
D. PB5V
AUDIO MUTE
IC501
24
23
22
REC
PB
PB
REC
EE/PB CTL
MUTE CTL
1
2
EQ
AUDIO R/P HEAD
LINE
MUTE
BUF
POWER MUTE
13
AUDIO OUT
LP CTL
21
PB
EE
5
6
8
9
LP EQ
PB EQ
PB EQ

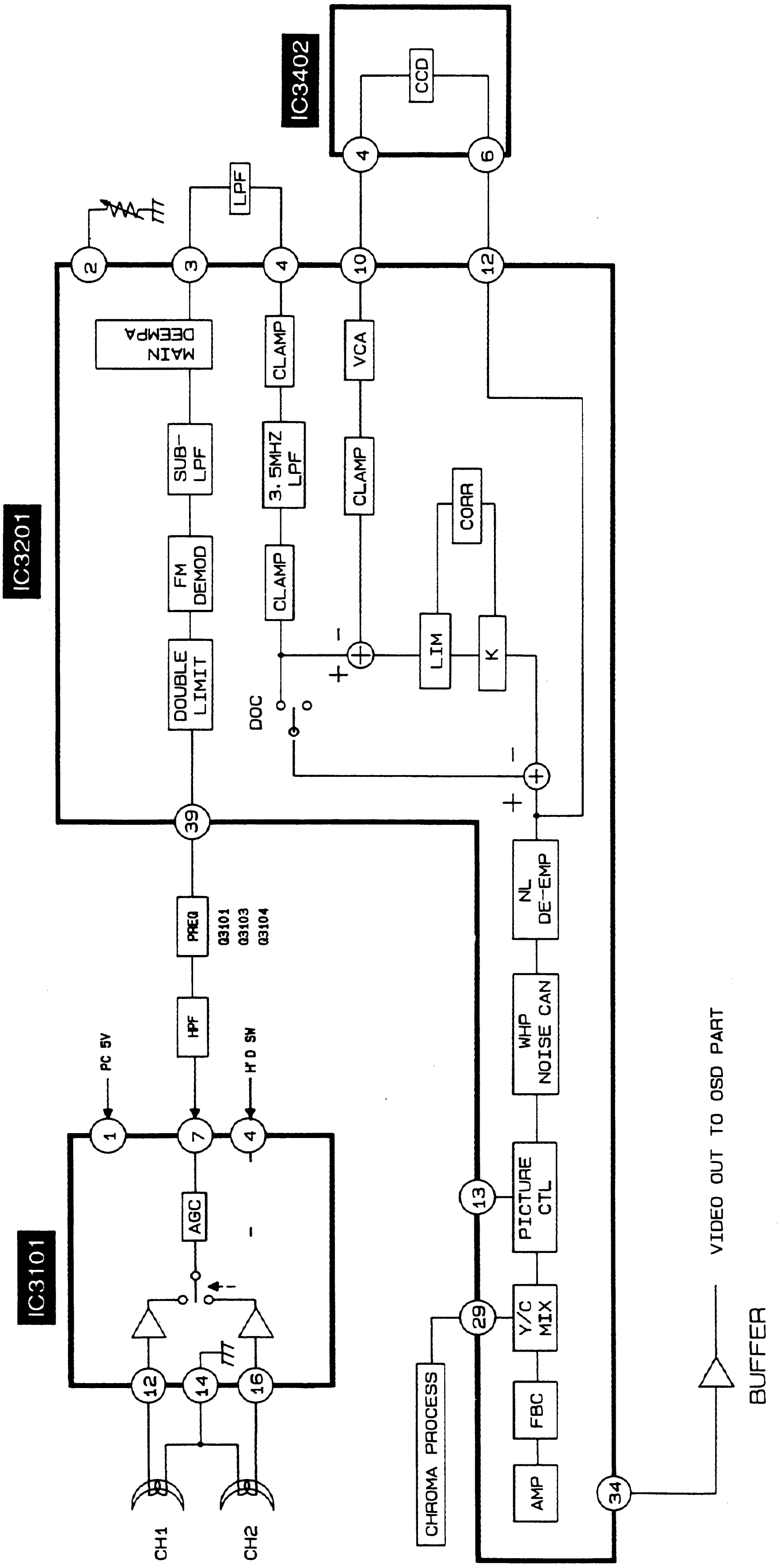
8-7. Audio Record Process


AUDIO MUTE
REC5V
PC12V
BIAS OSC
IC501
22
24
VR501
[AUDIO BIAS LEVEL]
MUTE CTL
REC/EE CTL
P
R
P
R
2
1
AUDIO R/P HEAD
AUDIO
11
ALC
REC MUTE
R
P
LINE
REC
POWER MUTE
17
23
20
15
16
EE/PB CTL
LP CTL
LP EQ
REC EQ

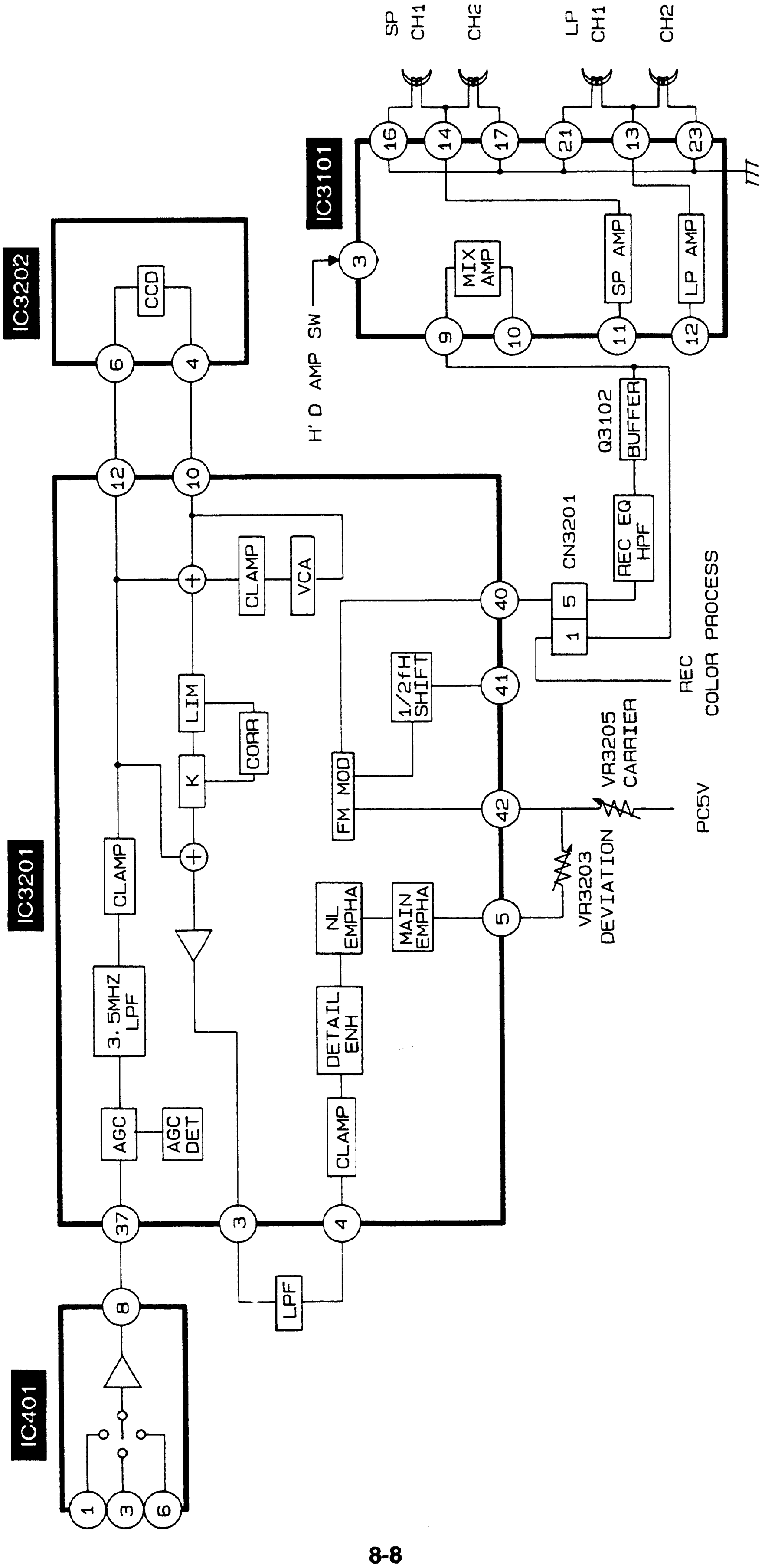
8-8. Luminance Playback Process (4H'd)


IC3402
CCD
4
6
LPF
2
3
4
10
12
IC3201
MAIN DEEMPA
CLAMP
VCA
SUB-LPF
3.5MHZ LPF
CLAMP
CORR
FM DEMOD
CLAMP
DOUBLE LIMIT
LIM
K
DOC
39
PREQ
Q3101
Q3103
Q3104
HPF
NL DE-EMP
WHP NOISE CAN
IC3406
PC 5V
H'D SW
H'D AMP SW
24
7
4
3
AGC
PICTURE CTL
13
Y/C MIX
29
FBC
AMP
CHROMA PROCESS
34
IC3101
15
14
18
20
13
22
SP
CH1
CH2
LP
CH1
CH2
6
5
3
1
4
6
1/2H CCD
LP SKEW BLOCK
IC3405

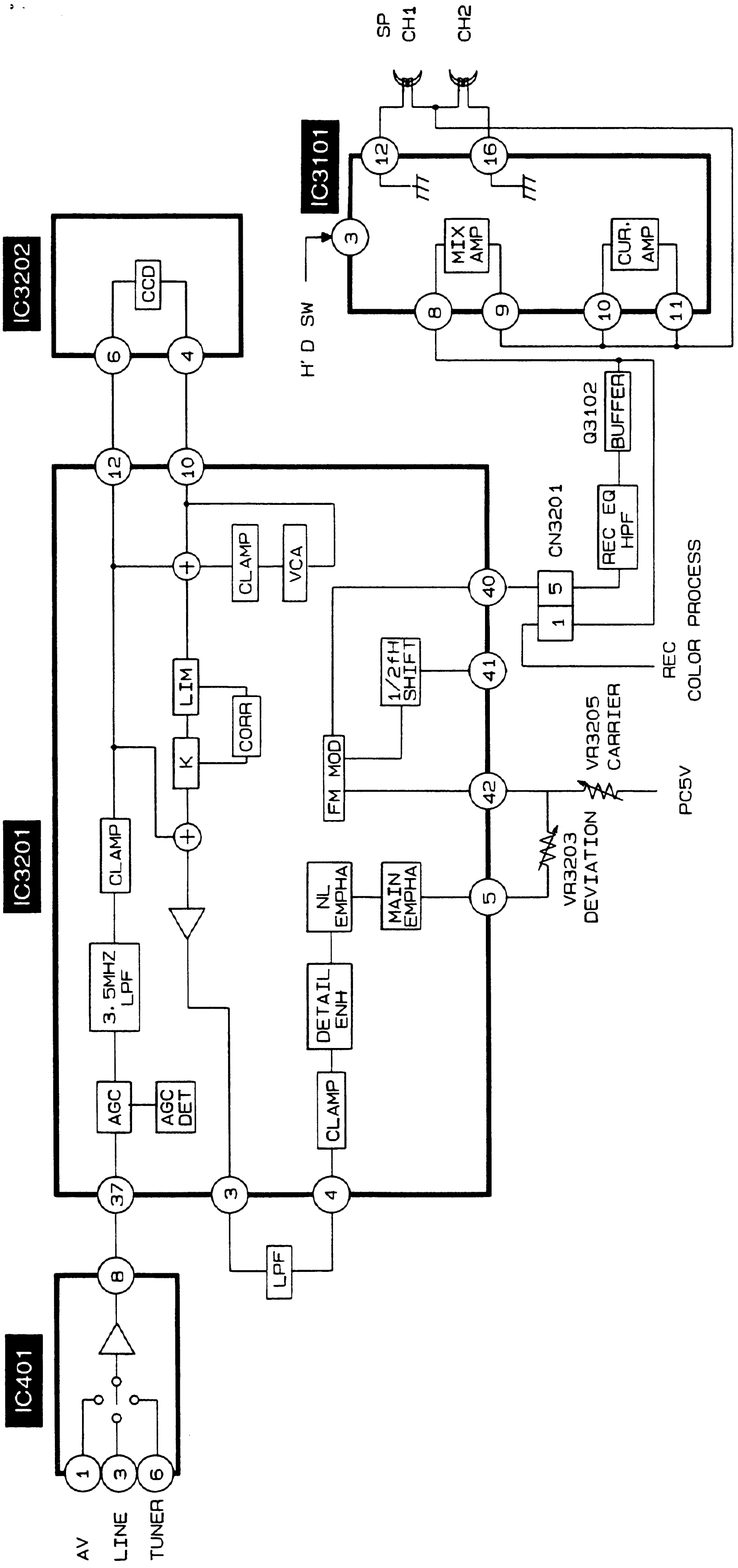
8-9. Luminance Playback Process (2H'd)


IC3402
CCD
4
6
IC3201
2
3
4
10
12
LPF
MAIN DEEMPA
CLAMP
VCA
SUB-LPF
3. 5MHZ LPF
CLAMP
CLAMP
FM DEMOD
CORR
DOUBLE LIMIT
LIM
K
DOC
39
PREQ
Q3101
Q3103
Q3104
HPF
PC 5V
H D SW
1
7
4
AGC
IC3101
12
14
16
CH1
CH2
NL DE-EMP
WHP NOISE CAN
PICTURE CTL
13
Y/C MIX
29
CHROMA PROCESS
FBC
AMP
34
VIDEO OUT TO OSD PART
BUFFER

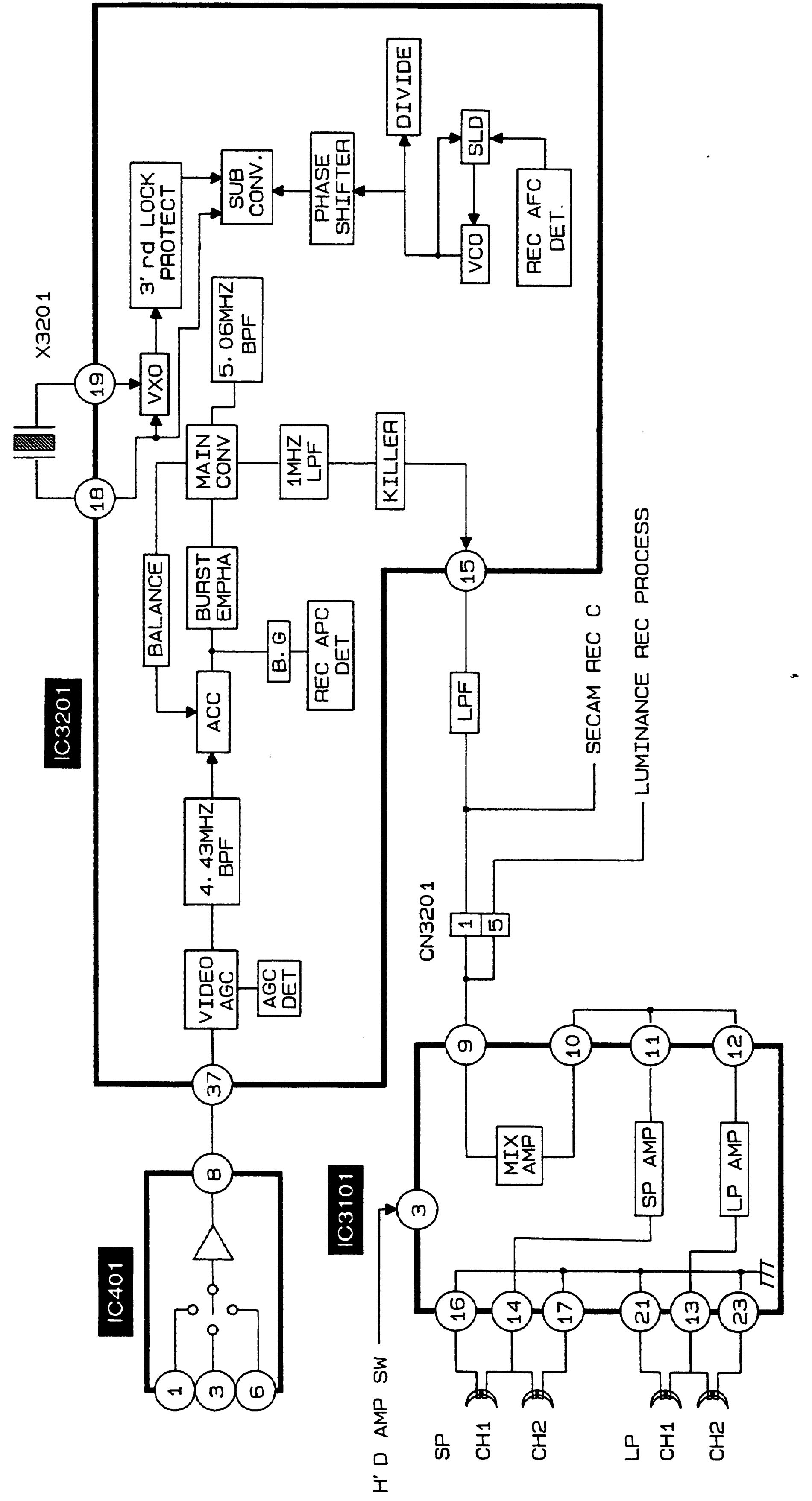
8-10. Luminance Record Process (4H'd)


IC401
1
3
6
8
IC3201
37
3
4
AGC
AGC DET
3.5MHZ LPF
CLAMP
CLAMP
DETAIL ENH
NL EMPHA
MAIN EMPHA
FM MOD
1/2fH SHIFT
K
LIM
CORR
CLAMP
VCA
LPF
12
10
40
41
42
5
IC3202
CCD
6
4
CN3201
1
5
REC EQ HPF
Q3102
BUFFER
REC COLOR PROCESS
VR3205 CARRIER
VR3203 DEVIATION
PC5V
H' D AMP SW
IC3101
3
9
10
11
12
MIX AMP
SP AMP
LP AMP
16
14
17
21
13
23
SP CH1
CH2
LP CH1
CH2

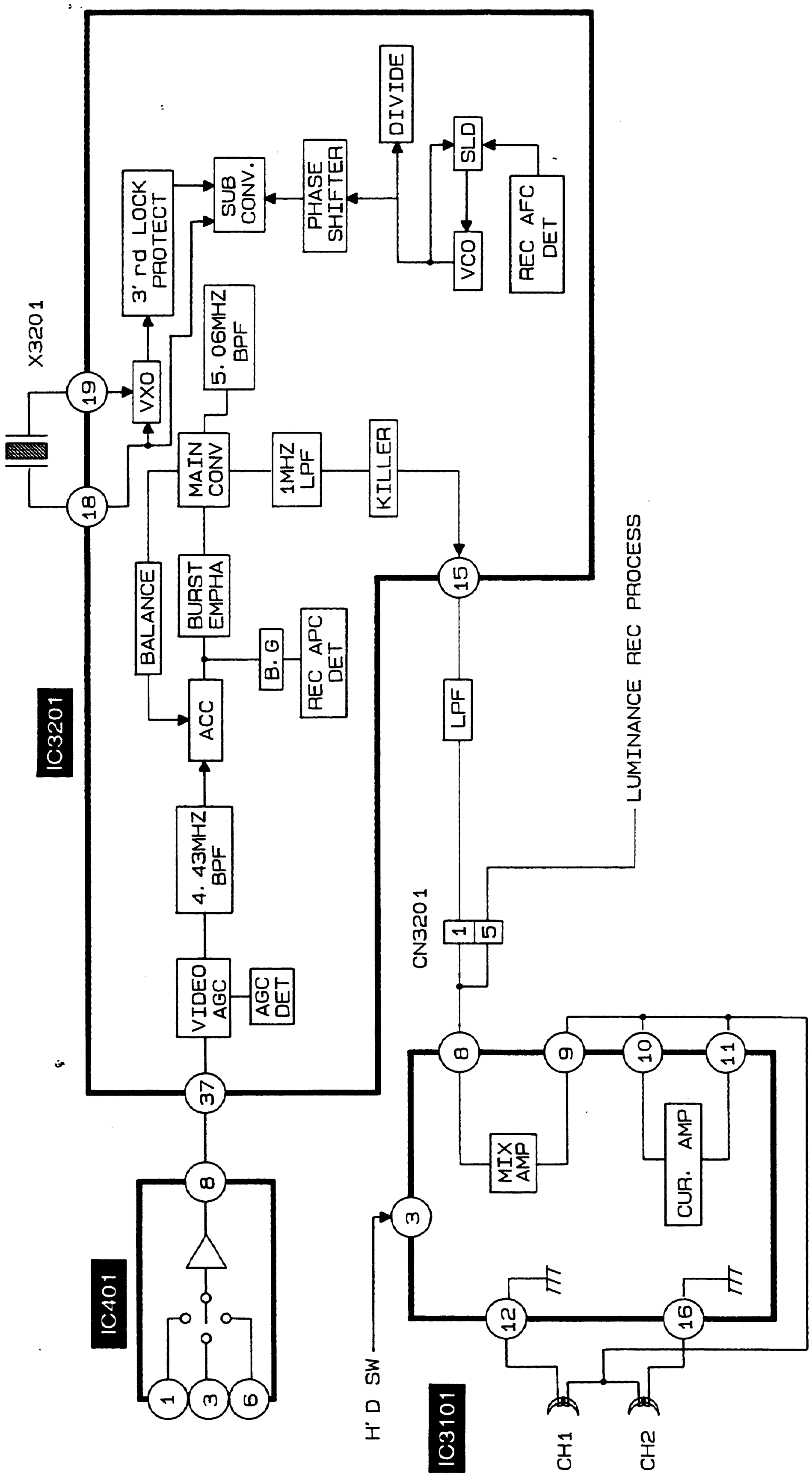
8-11. Luminance Record Process (2H'd)


IC401
AV
LINE
TUNER
IC3201
IC3202
CCD
AGC
AGC DET
3. 5MHZ LPF
CLAMP
K
LIM
CORR
CLAMP
VCA
LPF
CLAMP
DETAIL ENH
NL EMPHA
MAIN EMPHA
FM MOD
1/2fH SHIFT
CN3201
REC EQ HPF
Q3102
BUFFER
IC3101
MIX AMP
CUR. AMP
H' D SW
SP CH1
CH2
VR3205 CARRIER
VR3203 DEVIATION
PC5V
REC COLOR PROCESS

8-12. Chrominance Playback Process (4H'd)

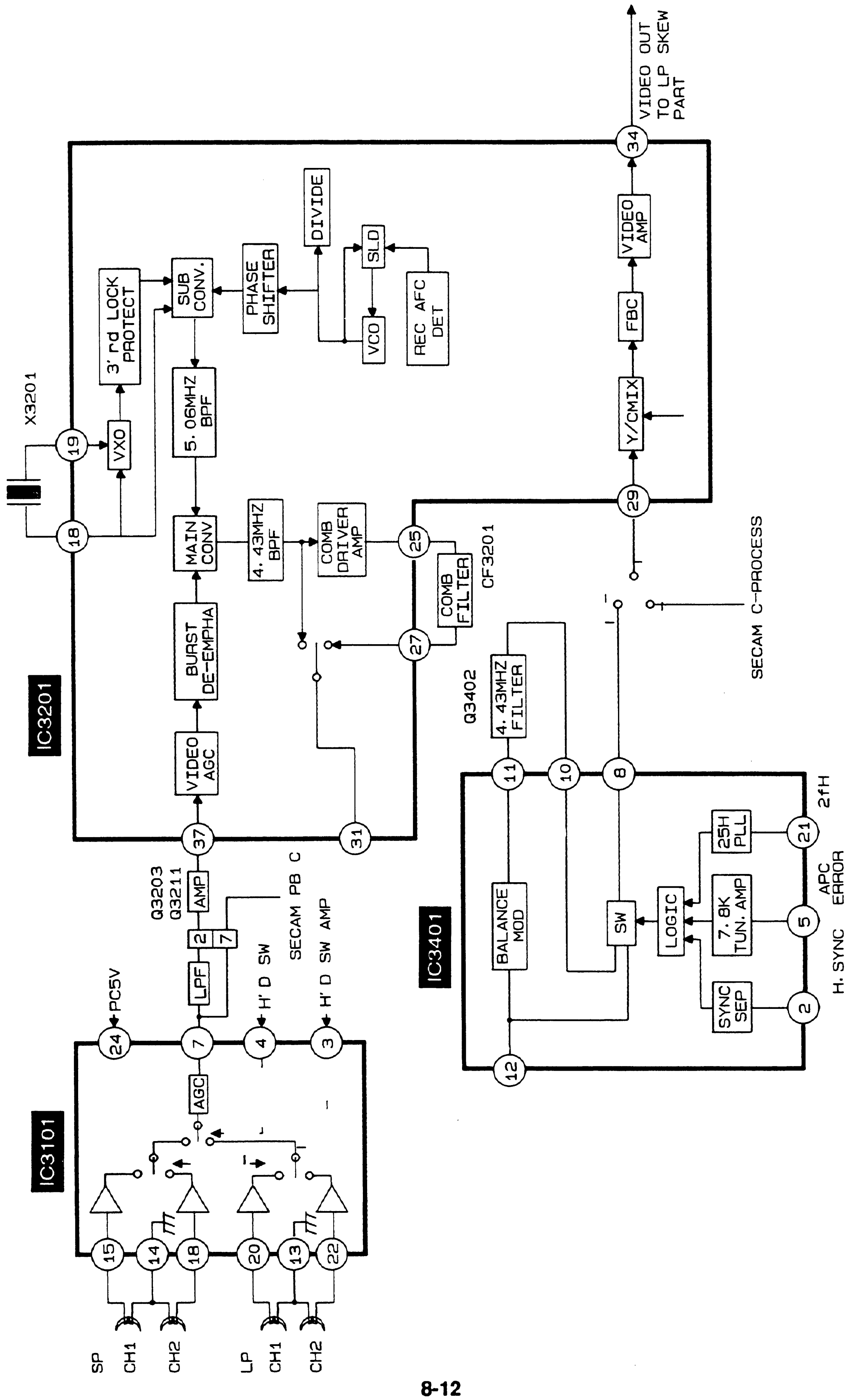

IC3201
X3201
18
19
VXO
3' rd LOCK PROTECT
SUB CONV.
PHASE SHIFTER
DIVIDE
SLD
VCO
REC AFC DET.
5.06MHZ BPF
MAIN CONV
1MHZ LPF
KILLER
BALANCE
BURST EMPHA
B.G
REC APC DET
ACC
4.43MHZ BPF
VIDEO AGC
AGC DET
37
15
LPF
SECAM REC C
LUMINANCE REC PROCESS
CN3201
1
5
IC3101
9
10
11
12
MIX AMP
SP AMP
LP AMP
3
16
14
17
21
13
23
IC401
8
1
3
6
H' D AMP SW
SP
CH1
CH2
LP
CH1
CH2

8-13. Chrominance Playback Process (2H'd)

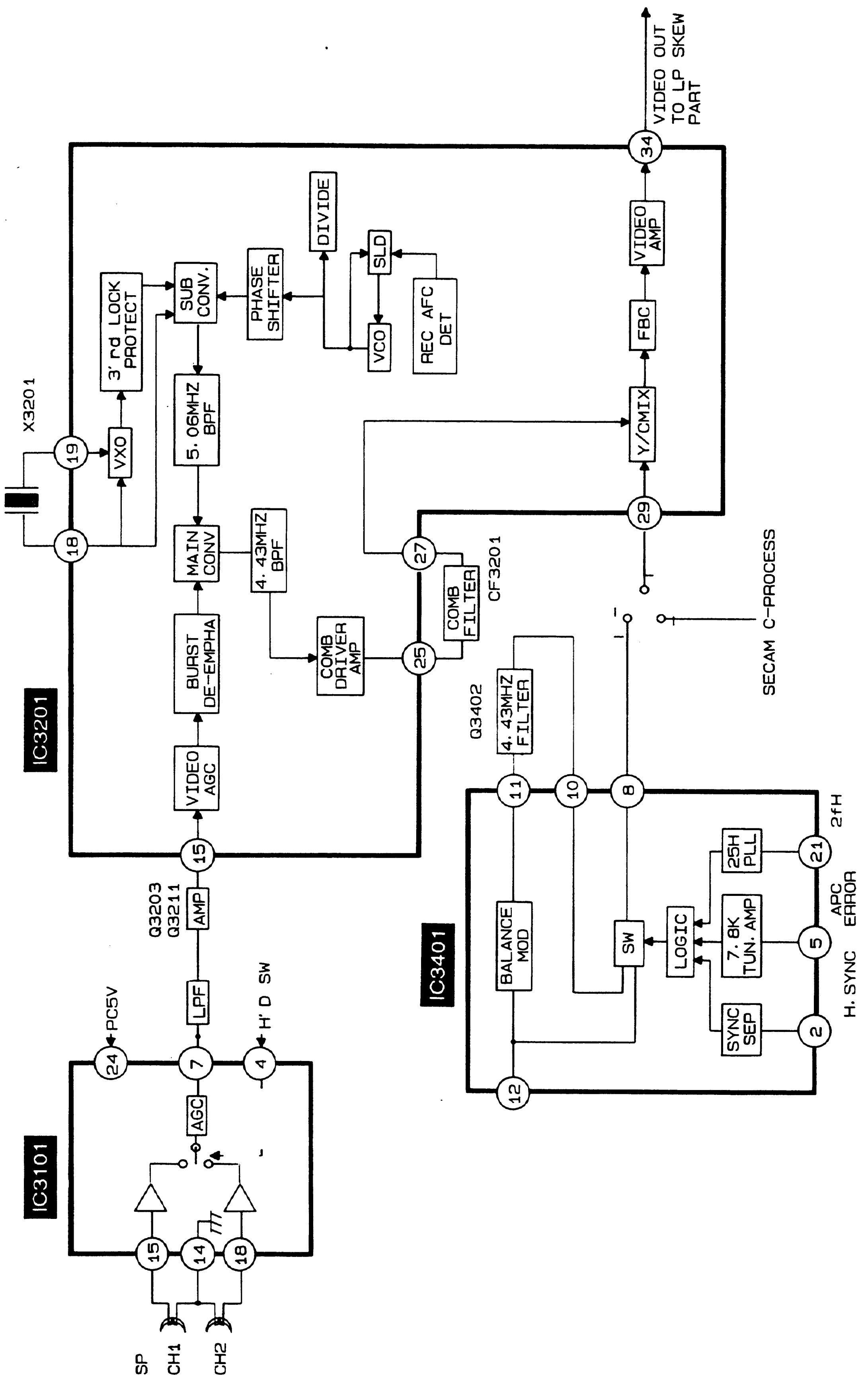


IC3201
X3201
18
19
VXO
3' rd LOCK PROTECT
SUB CONV.
PHASE SHIFTER
DIVIDE
SLD
VCO
REC AFC DET
5. 06MHZ BPF
MAIN CONV
1MHZ LPF
KILLER
15
BALANCE
BURST EMPHA
B. G
REC APC DET
ACC
LPF
4. 43MHZ BPF
VIDEO AGC
AGC DET
37
LUMINANCE REC PROCESS
CN3201
1
5
IC401
8
1
3
6
IC3101
8
9
10
11
MIX AMP
CUR. AMP
3
12
16
H' D SW
CH1
CH2

8-14. Chrominance Record Process (4H'd)


IC3101
SP CH1
CH2
LP CH1
CH2
15
14
18
20
13
22
AGC
24
PC5V
7
4
H'D SW
3
H'D SW AMP
LPF
2
7
AMP
Q3203
Q3211
SECAM PB C
IC3201
37
VIDEO AGC
BURST DE-EMPHA
MAIN CONV
4.43MHZ BPF
COMB DRIVER AMP
25
COMB FILTER
CF3201
27
31
18
19
X3201
VXO
3'rd LOCK PROTECT
SUB CONV.
5.06MHZ BPF
PHASE SHIFTER
DIVIDE
SLD
VCO
REC AFC DET
29
Y/CMIX
FBC
VIDEO AMP
34
VIDEO OUT TO LP SKEW PART
SECAM C-PROCESS
IC3401
Q3402
4.43MHZ FILTER
11
10
8
BALANCE MOD
SW
LOGIC
SYNC SEP
7.8K TUN. AMP
25H PLL
12
2
H. SYNC
5
APC ERROR
21
2fH

8-15. Chrominance Record Process (2H'd)


IC3101
SP
CH1
CH2
15
14
18
AGC
24
7
4
PC5V
H' D SW
LPF
Q3203
Q3211
AMP
IC3201
15
VIDEO AGC
BURST DE-EMPHA
MAIN CONV
4. 43MHZ BPF
5. 06MHZ BPF
SUB CONV.
3' rd LOCK PROTECT
VXO
X3201
18
19
PHASE SHIFTER
DIVIDE
SLD
VCO
REC AFC DET
COMB DRIVER AMP
25
27
COMB FILTER
CF3201
29
Y/CMIX
FBC
VIDEO AMP
34
VIDEO OUT TO LP SKEW PART
SECAM C-PROCESS
Q3402
4. 43MHZ FILTER
IC3401
11
10
8
12
BALANCE MOD
SW
LOGIC
SYNC SEP
7. 8K TUN. AMP
25H PLL
2
5
21
H. SYNC
APC ERROR
2fH

9. CIRCUIT BOARDS

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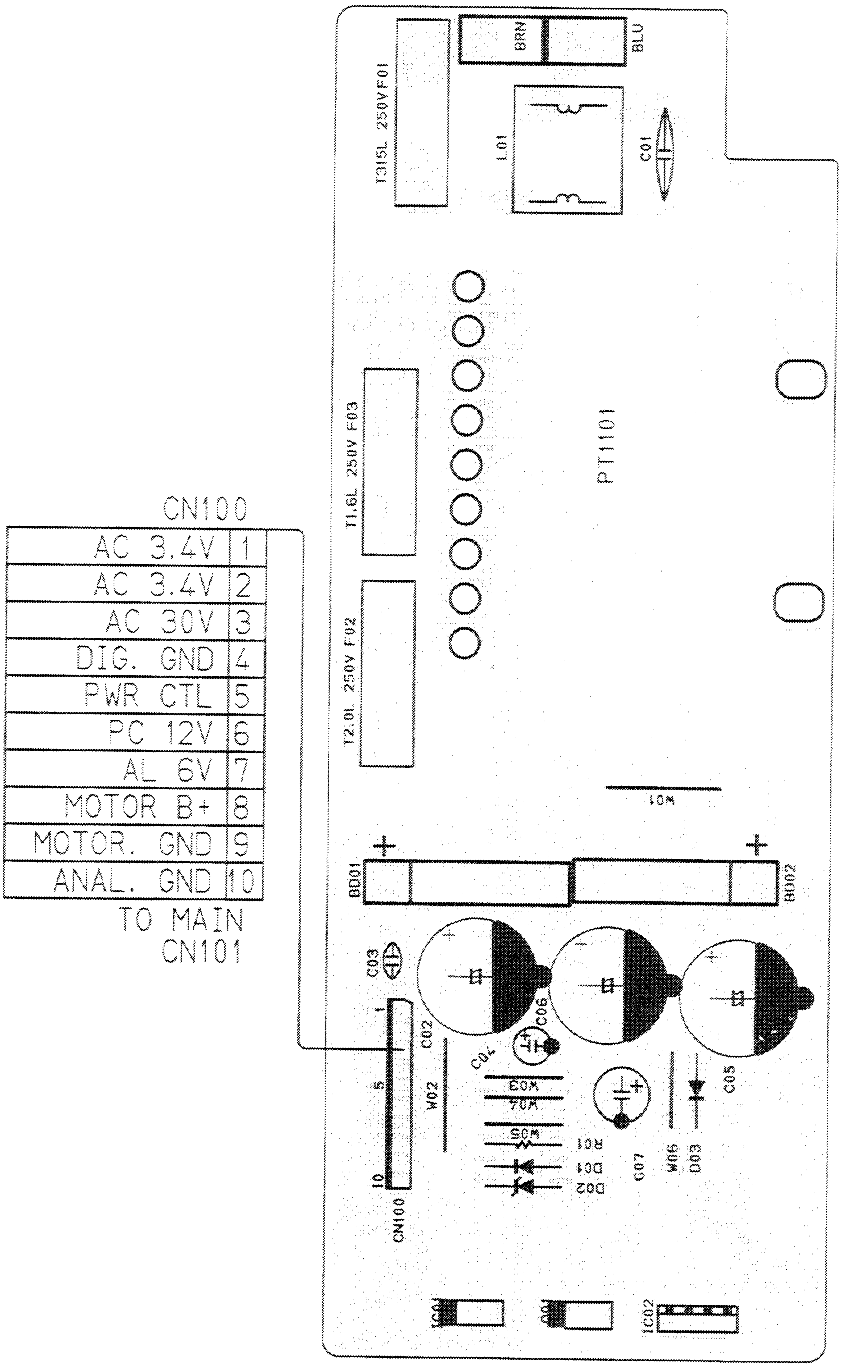
9-1. Regulator (Top Side)

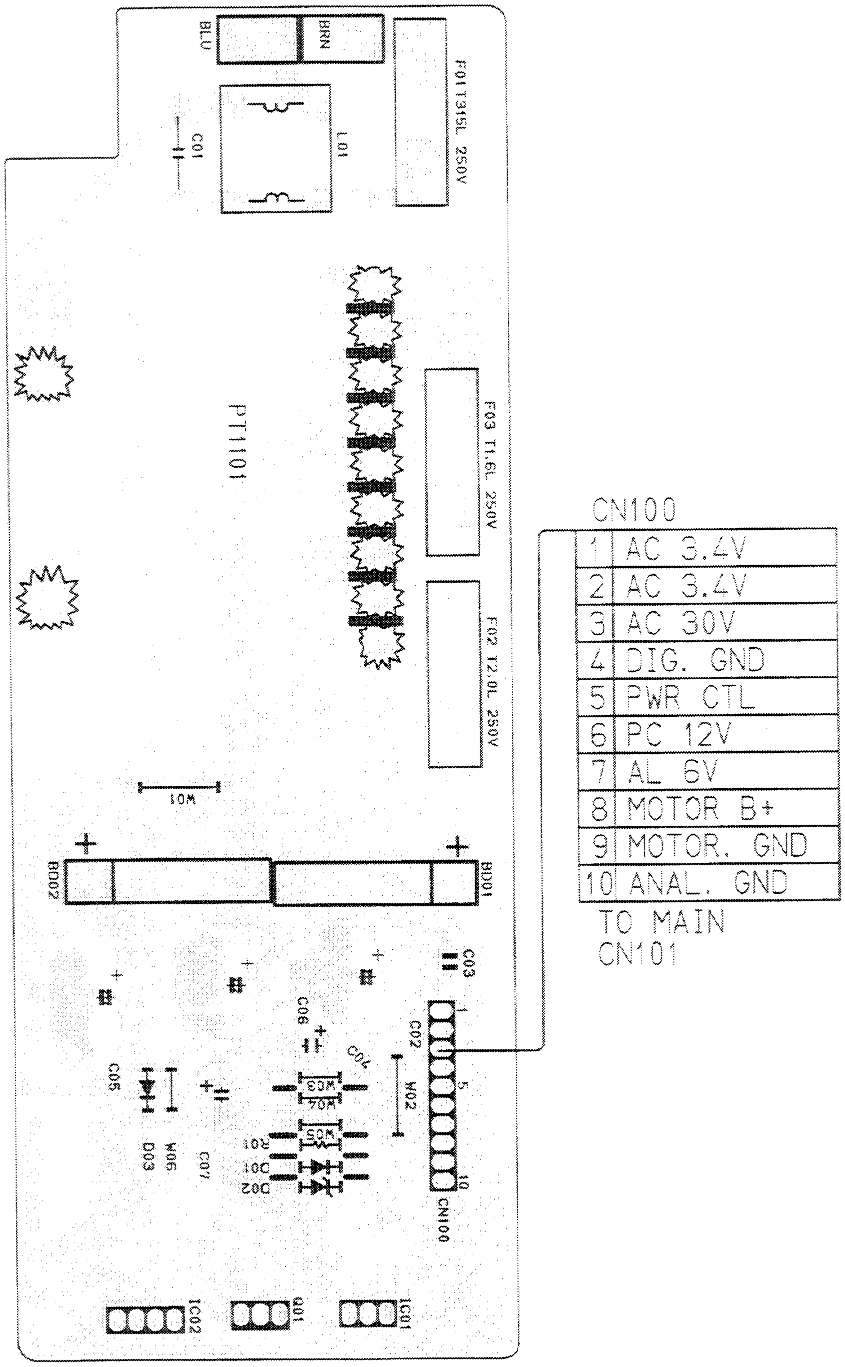

T315L 250V F01
BRN
BLU
L01
C01
T1.6L 250V F03
T2.0L 250V F02
PT1101
W01
BD01
BD02
C03
C02
C06
C04
W02
W03
W04
W05
R01
D01
D02
C07
W06
D03
C05
CN100
IC02
1
5
10

CN100

AC 3.4V	1
AC 3.4V	2
AC 30V	3
DIG. GND	4
PWR CTL	5
PC 12V	6
AL 6V	7
MOTOR B+	8
MOTOR. GND	9
ANAL. GND	10

TO MAIN
CN101

9-1. Regulator (Bottom Side)

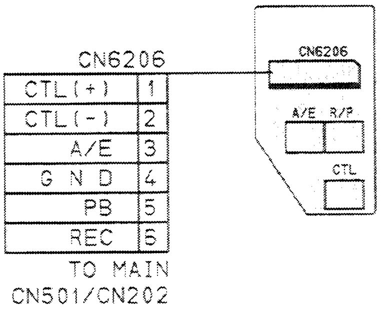

BLU
BRN
F01 T315L 250V
C01
L01
PT1101
F03 T1.6L 250V
F02 T2.0L 250V
W01
BD02
BD01
C03
C06
C02
C04
W02
W03
W04
W05
C05
D03
W06
C07
R01
D01
D02
CN100
IC02
Q01
IC01

CN100

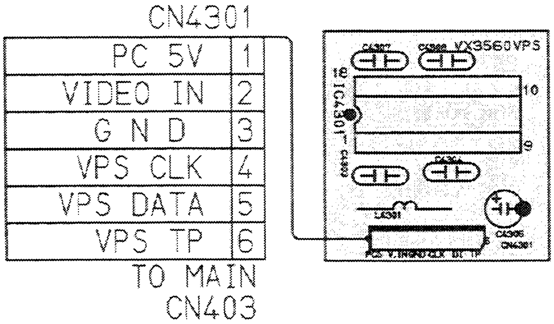
1	AC 3.4V
2	AC 3.4V
3	AC 30V
4	DIG. GND
5	PWR CTL
6	PC 12V
7	AL 6V
8	MOTOR B+
9	MOTOR. GND
10	ANAL. GND

TO MAIN
CN101

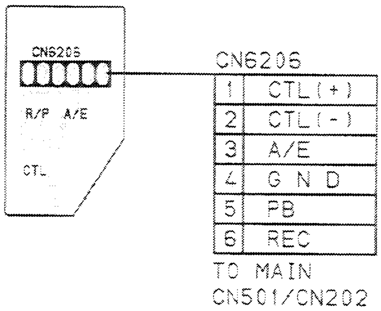
9-2. A/C Head (Top Side)


CN6206
CTL(+) 1
CTL(-) 2
A/E 3
GND 4
PB 5
REC 6
TO MAIN
CN501/CN202
CN6206
A/E
R/P
CTL

9-3. V.P.S (VR4633/VR4632) (Top Side)


CN4301
PC 5V 1
VIDEO IN 2
GND 3
VPS CLK 4
VPS DATA 5
VPS TP 6
TO MAIN
CN403
VX3560VPS
18
IC4301
10
9
L4301
C4305
CN4301

9-2. A/C Head (Bottom Side)


CN6206
R/P
A/E
CTL

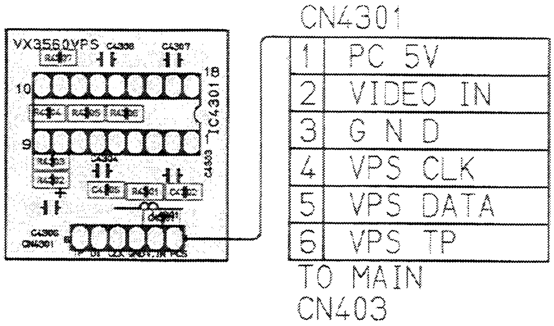
CN6206

1	CTL(+)
2	CTL(-)
3	A/E
4	GND
5	PB
6	REC

TO MAIN
CN501/CN202

9-3. V.P.S (VR4633/VR4632) (Bottom Side)

▨ : CHIP Parts

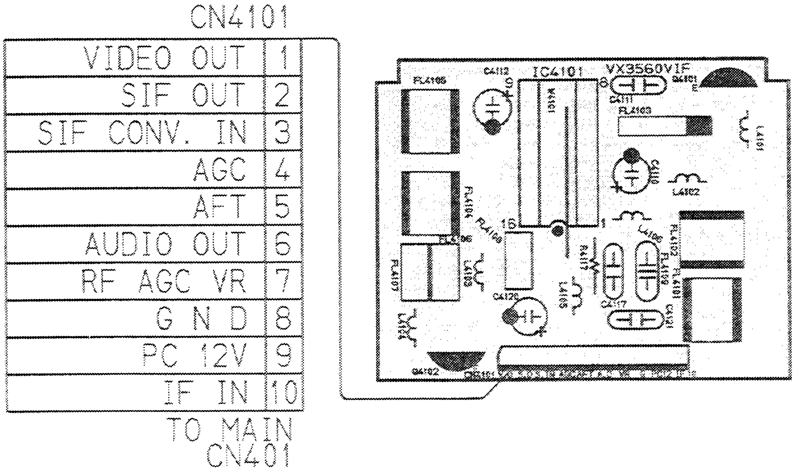

VX3560VPS
C4308
C4307
10
18
9
IC4301
C4303
CN4301

CN4301

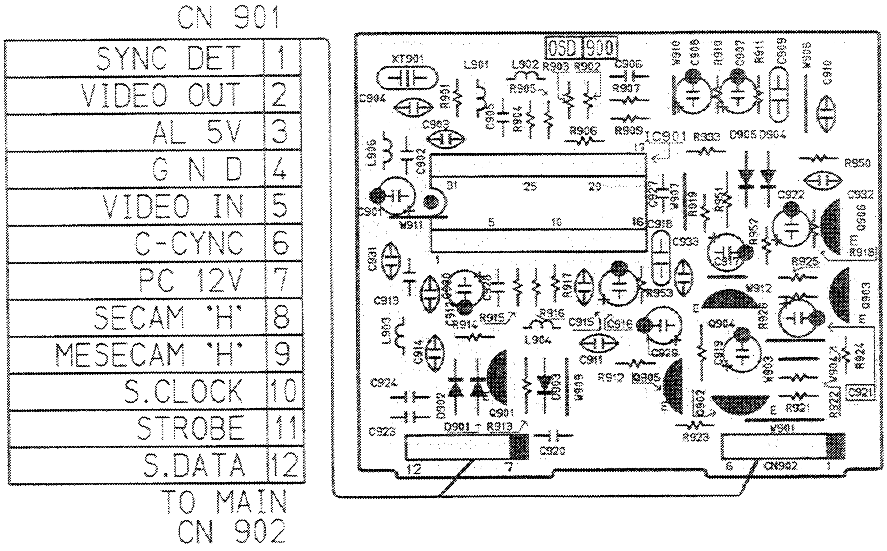
1	PC 5V
2	VIDEO IN
3	GND
4	VPS CLK
5	VPS DATA
6	VPS TP

TO MAIN
CN403

9-4. IF-PACK (Top Side)

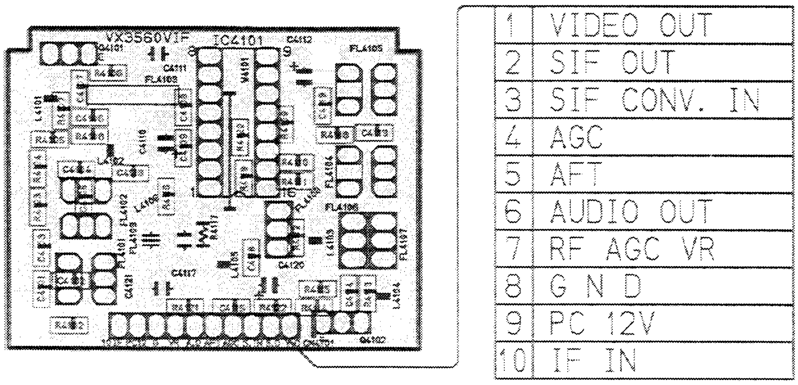

CN4101
VIDEO OUT 1
SIF OUT 2
SIF CONV. IN 3
AGC 4
AFT 5
AUDIO OUT 6
RF AGC VR 7
G N D 8
PC 12V 9
IF IN 10
TO MAIN CN401
IC4101
VX3560VIF
FL4105
FL4104
FL4107
FL4103
FL4102
FL4101
C4112
C4111
C4110
C4117
C4120
C4121
Q4101
Q4102
L4101
L4102
L4103
L4105
L4106
L4121
CN4101

9-5. O.S.D (Top Side)


CN 901
SYNC DET 1
VIDEO OUT 2
AL 5V 3
G N D 4
VIDEO IN 5
C-CYNC 6
PC 12V 7
SECAM 'H' 8
MESECAM 'H' 9
S.CLOCK 10
STROBE 11
S.DATA 12
TO MAIN CN 902
OSD 900
XT901
IC901
L901
L902
L903
L904
L906
R901
R902
R903
R904
R905
R906
R907
R909
R912
R913
R914
R915
R916
R917
R918
R919
R921
R922
R923
R924
R925
R926
R950
R953
C901
C902
C903
C904
C905
C906
C907
C908
C909
C910
C911
C912
C913
C914
C915
C916
C917
C918
C919
C920
C921
C922
C923
C924
C928
C931
C932
C933
D901
D902
D903
D904
D905
Q901
Q902
Q903
Q904
W901
W903
W904
W906
W909
W910
W911
W912
W917
CN902

9-4. IF-PACK (Bottom Side)

▨ : CHIP Parts

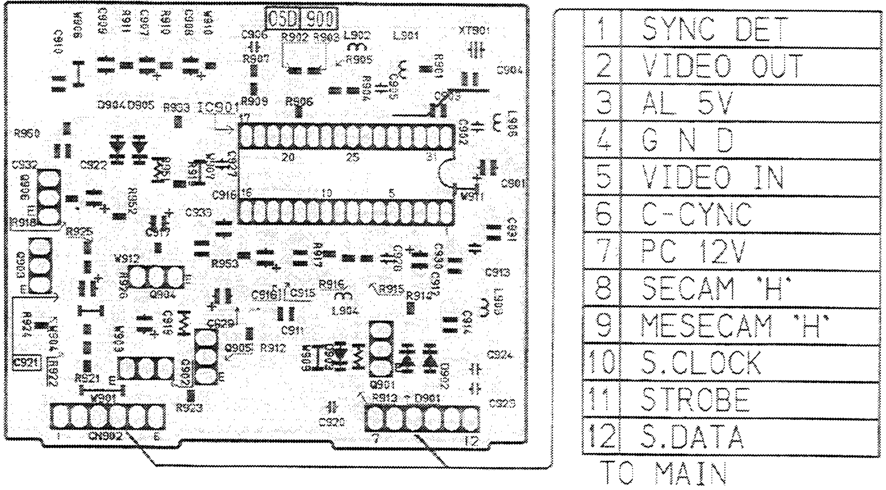

VX5560VIF
IC4101
Q4101
Q4102
FLA105
FLA103
FLA104
FLA106
FLA107
M4101

CN4101

1	VIDEO OUT
2	SIF OUT
3	SIF CONV. IN
4	AGC
5	AFT
6	AUDIO OUT
7	RF AGC VR
8	G N D
9	PC 12V
10	IF IN

TO MAIN CN401

9-5. O.S.D (Bottom Side)


OSD 900
IC901
XT901
CN902
Q901
Q904
Q905
D901
D902
D904
D905

CN 901

1	SYNC DET
2	VIDEO OUT
3	AL 5V
4	G N D
5	VIDEO IN
6	C-CYNC
7	PC 12V
8	SECAM 'H'
9	MESECAM 'H'
10	S.CLOCK
11	STROBE
12	S.DATA

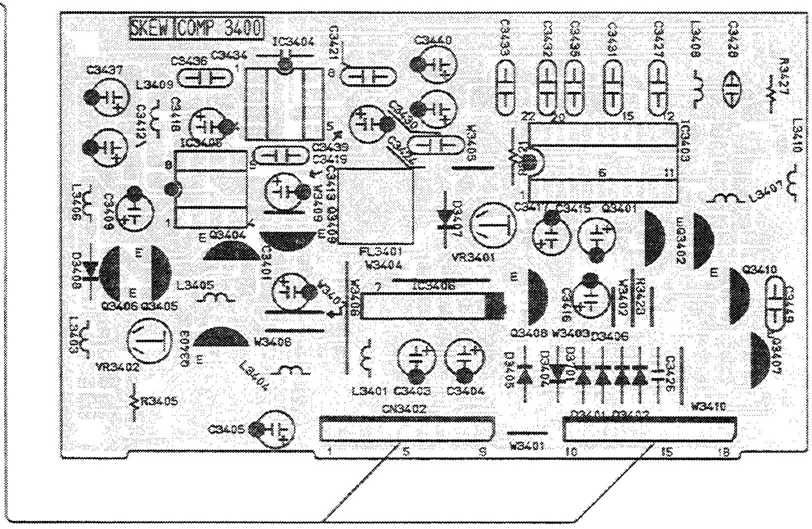
TO MAIN CN 902

9-6. LP SKEW (VR4633) (Top Side)

CN3402

TEST POINT	1
PC 12V	2
SKEW.V.OUT	3
SKEW.V.IN	4
TEST POINT	5
C-SYNC	6
G N D	7
PC 5V	8
D'LY PB 5V	9
LP 'H'	10
NTSE 'H'	11
MESECAM 'H '	12
SECAM 'H'	13
SKEW.C.OUT	14
LP TRICK 'H'	15
SKEW.C.IN	16
APC ERROR	17
Fsc	18

TO MAIN
CN3401

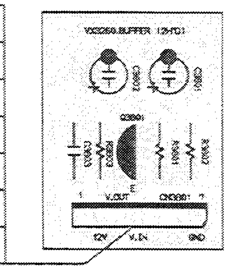

SKEW COMP 3400
IC3404
IC3405
IC3406
IC3403
FL3401
VR3401
VR3402
CN3402
W3401
Q3401
Q3402
Q3403
Q3404
Q3405
Q3406
Q3407
Q3408
Q3409
Q3410
L3401
L3405
L3409
L3410
R3405
R3427
C3405
C3437
C3440
1
5
9
10
15
18

9-7. Buffer (VR4632/VR4631) (Top Side)

CN3801

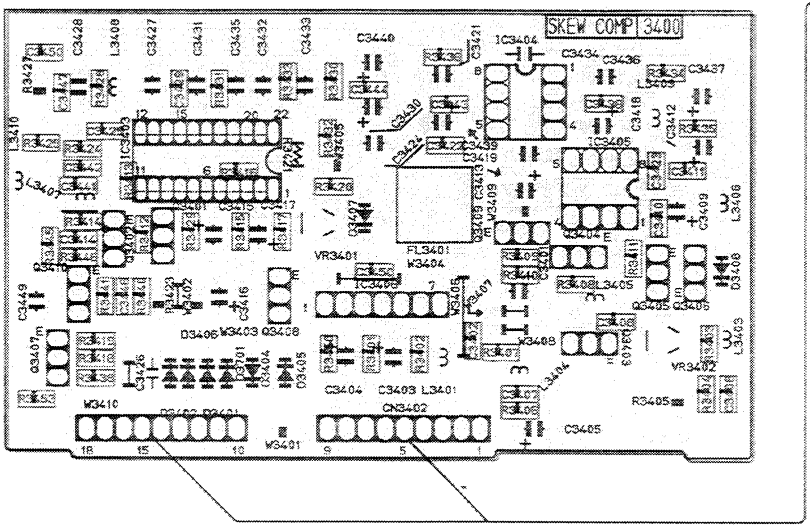
N C	1
PC 12V	2
VIDEO OUT	3
VIDEO IN	4
N C	5
N C	6
G N D	7

TO MAIN
CN3401


Q3801
CN3801
V.OUT
12V
V.IN
GND

9-6. LP SKEW (VR4633) (Bottom Side)

▨ : CHIP Parts

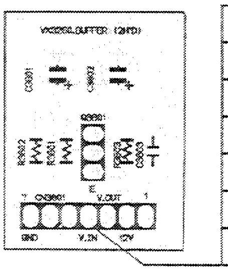

SKEW COMP 3400
IC3404
IC3405
IC3403
IC3406
FL3401
VR3401
VR3402
CN3402
W3410
W3401
18
15
10
9
5
1

CN3402

1	TEST POINT
2	PC 12V
3	SKEW.V.OUT
4	SKEW.V.IN
5	TEST POINT
6	C-SYNC
7	G N D
8	PC 5V
9	D'LY PB 5V
10	LP 'H'
11	NTSE 'H'
12	MESECAM 'H '
13	SECAM 'H'
14	SKEW.C.OUT
15	LP TRICK 'H'
16	SKEW.C.IN
17	APC ERROR
18	Fsc

TO MAIN
CN3401

9-7. Buffer (VR4632/VR4631) (Bottom Side)

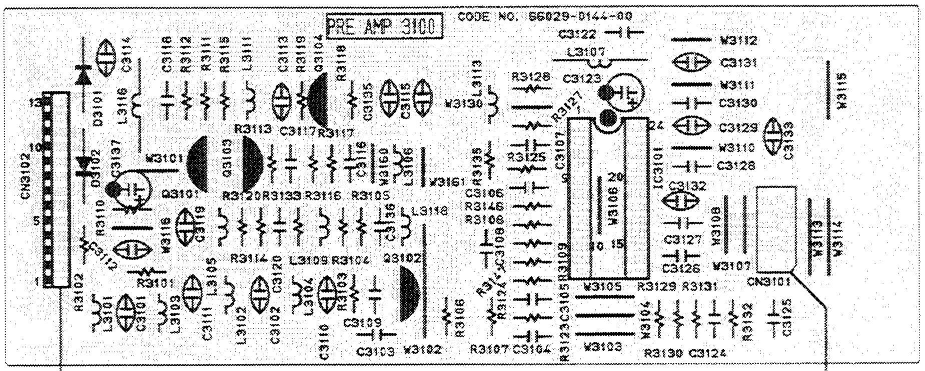

E
7
V.OUT
1
GND
V.IN
12V

CN3801

1	N C
2	PC 12V
3	VIDEO OUT
4	VIDEO IN
5	N C
6	N C
7	G N D

TO MAIN
CN3401

9-8. Pre-Amp (VR4633) (Top Side)


PRE AMP 3100
CODE NO. 66029-0144-00
CN3102
CN3101
IC3101
Q3101
Q3102
Q3103
Q3104
D3101
D3102
13
10
5
1
24
20
15
10
1

CN 3102

REC C	1
PB FM C	2
G N D	3
PB FM Y	4
REC Y	5
G N D	6
PB C(Envelope)	7
H'D SW	8
FM DET	9
PC 5V	10
TRICK 'H'	11
H'D AMP SW	12
ENVE COMP	13

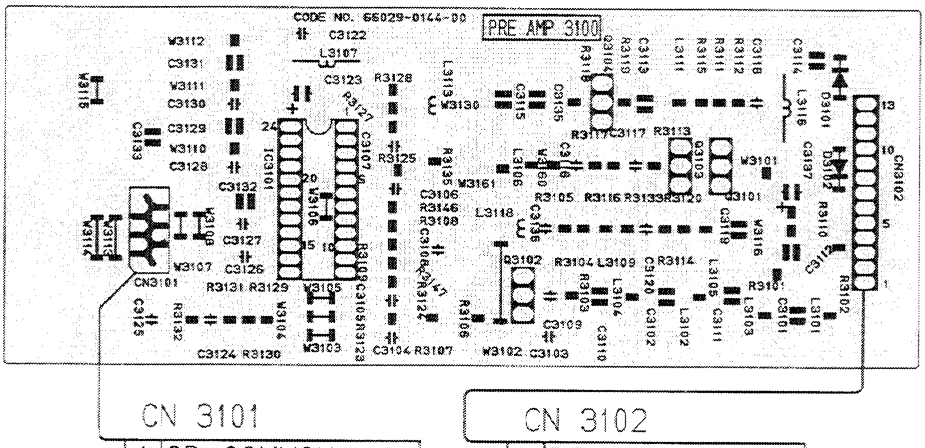
TO MAIN
CN 3103

CN 3101

SP COMMON	1
SP CH1	2
G N D	3
SP CH2	4
G N D	5
LP CH1	6
LP CH2	7
LP COMMON	8

TO DRUM

9-8. Pre-Amp (VR4633) (Bottom Side)


CODE NO. 66029-0144-00
PRE AMP 3100
IC3101
CN3101
CN3102
Q3101
Q3102
Q3103
Q3104
D3101
D3102

CN 3101

1	SP COMMON
2	SP CH1
3	G N D
4	SP CH2
5	G N D
6	LP CH1
7	LP CH2
8	LP COMMON

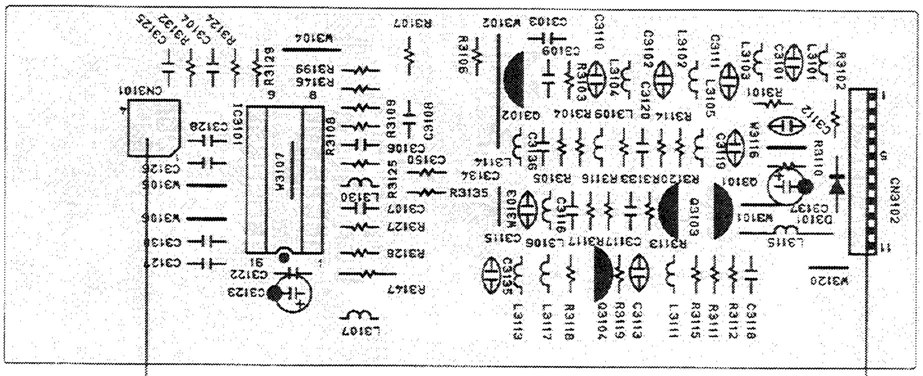
TO DRUM

CN 3102

1	REC C
2	PB FM C
3	G N D
4	PB FM Y
5	REC Y
6	G N D
7	PB C(Envelope)
8	H'D SW
9	FM DET
10	PC 5V
11	TRICK 'H'
12	H'D AMP SW
13	ENVE COMP

TO MAIN
CN 3103

9-9. Pre-Amp (VR4632/VR4631) (Top Side)



CN3101
IC3101
W3107
R3135
CN3102

CN3101

CH 2	1
G N D	2
CH 1	3
COMMON	4

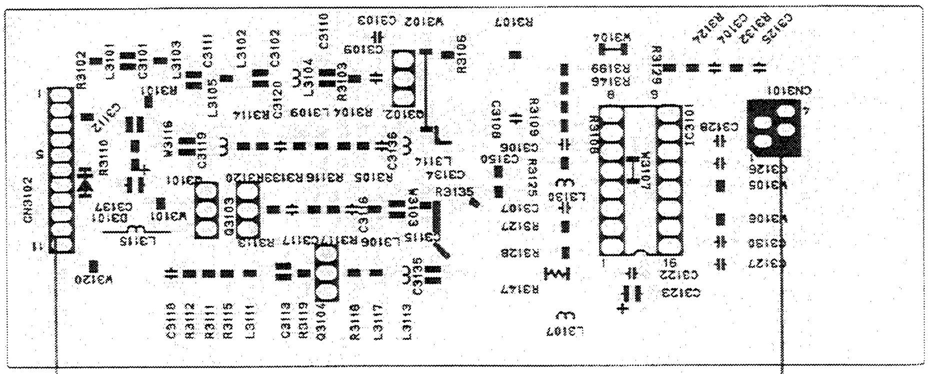
TO DRUM

CN3102

REC C	1
PB FM C	2
G N D	3
PB FM Y	4
REC Y	5
G N D	6
REC "H"	7
H'D SW 25	8
ENVE DET	9
PC 5V	10
TRICK "H"	11

TO MAIN
CN3103

9-9. Pre-Amp (VR4632/VR4631) (Bottom Side)



CN3102

1	REC C
2	PB FM C
3	G N D
4	PB FM Y
5	REC Y
6	G N D
7	REC 'H'
8	H'D SW 25
9	ENVE DET
10	PC 5V
11	TRICK 'H'

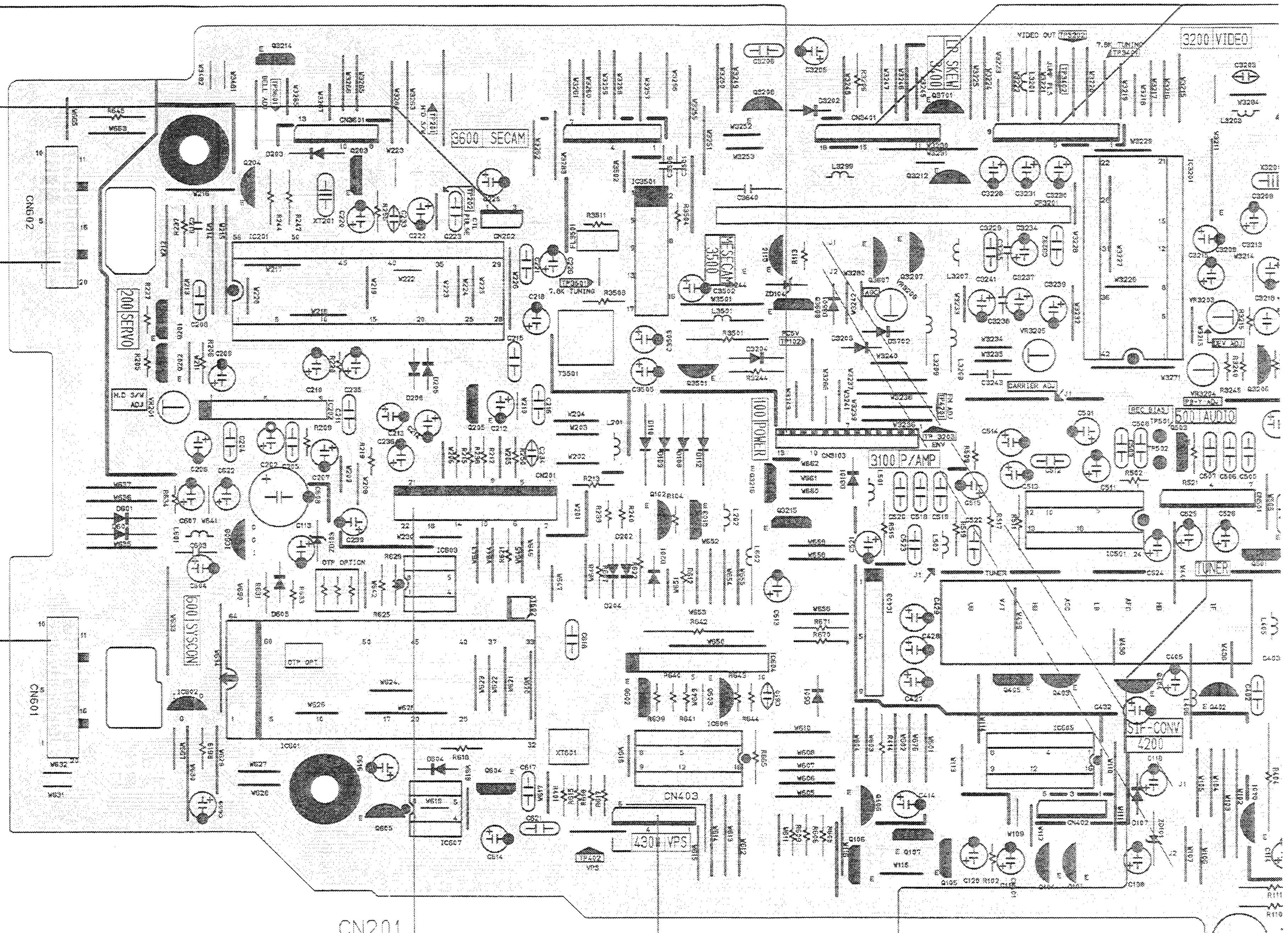
TO MAIN
CN3103

CN3101

1	CH 2
2	G N D
3	CH 1
4	COMMON

TO DRUM

9-10. Main (Top Side)


200 SERVO
600 SYSCON
3600 SECAM
MESECAM 3500
100 POWER
3100 P/AMP
500 AUDIO
3200 VIDEO
SIF-CONV 4200
430 VPS
TUNER
CN403
CN602
CN601
H.D S/W ADJ
OTP OPTION
CARRIER ADJ
VIDEO OUT
7.8K TUNING

CN202

G N D	1
CTL(+)	2
CTL(-)	3

TO A/C HEAD

(VR4632/VR4631)

CN3103

REC C	1
PB FM C	2
G N D	3
PB FM Y	4
REC Y	5
G N D	6
REC 'H'	7
H'D SW 25	8
ENVE DET	9
PC 5V	10
TRICK 'H'	11

TO PRE/AMP
CN3102

(VR4633)

CN3103

REC C	1
PB FM C	2
G N D	3
PB FM Y	4
REC Y	5
G N D	6
PB C(Envelope)	7
'H'D SW	8
FM DET	9
PC 5V	10
TRICK 'H'	11
'H'D AMP SW	12
ENVE COMP	13

TO PRE/AMP
CN3102

CN602

G11	1
G10	2
G9	3
N C	4
N C	5
N C	6
N C	7
MESECAM 'H'	8
SECAM 'H'	9
G N D	10
PICTURE CTL	11
N C	12
S5	13
S6	14
S7	15
S8	16
S9	17
S10	18
G13	19
G14	20

TO TIMER
CN702

CN601

REMOCON	1
AC 3.4V	2
AC 3.4V	3
PC 5V	4
AL 5V	5
G8	6
G7	7
G6	8
G5	9
G4	10
G3	11
G2	12
G1	13
S4	14
S3	15
S2	16
S1	17
KEY 1	18
KEY 2	19
KEY 3	20

TO TIMER
CN701

CN201

CTL REF	12	D-GND	1
C.M DRIVE	13	D-GND	2
I-LIMIT	14	AL 5V	3
C.M B+	15	UN LOAD	4
M-GND	16	LOAD	5
D.M DRIVE	17	S DATA	6
D.M B+	18	STROBE	7
D-FG	19	S CLOCK	8
D-GND	20	PC 5V	9
D-PG	21	C.M F/A	10
N C	22	C-FG	11

TO DECK JOINT
CN6202

CN403

PC 5V	1
TU VIDEO IN	2
G N D	3
VPS CLK	4
VPS DATA	5
VPS TP	6

TO VPS
CN4301

CN501

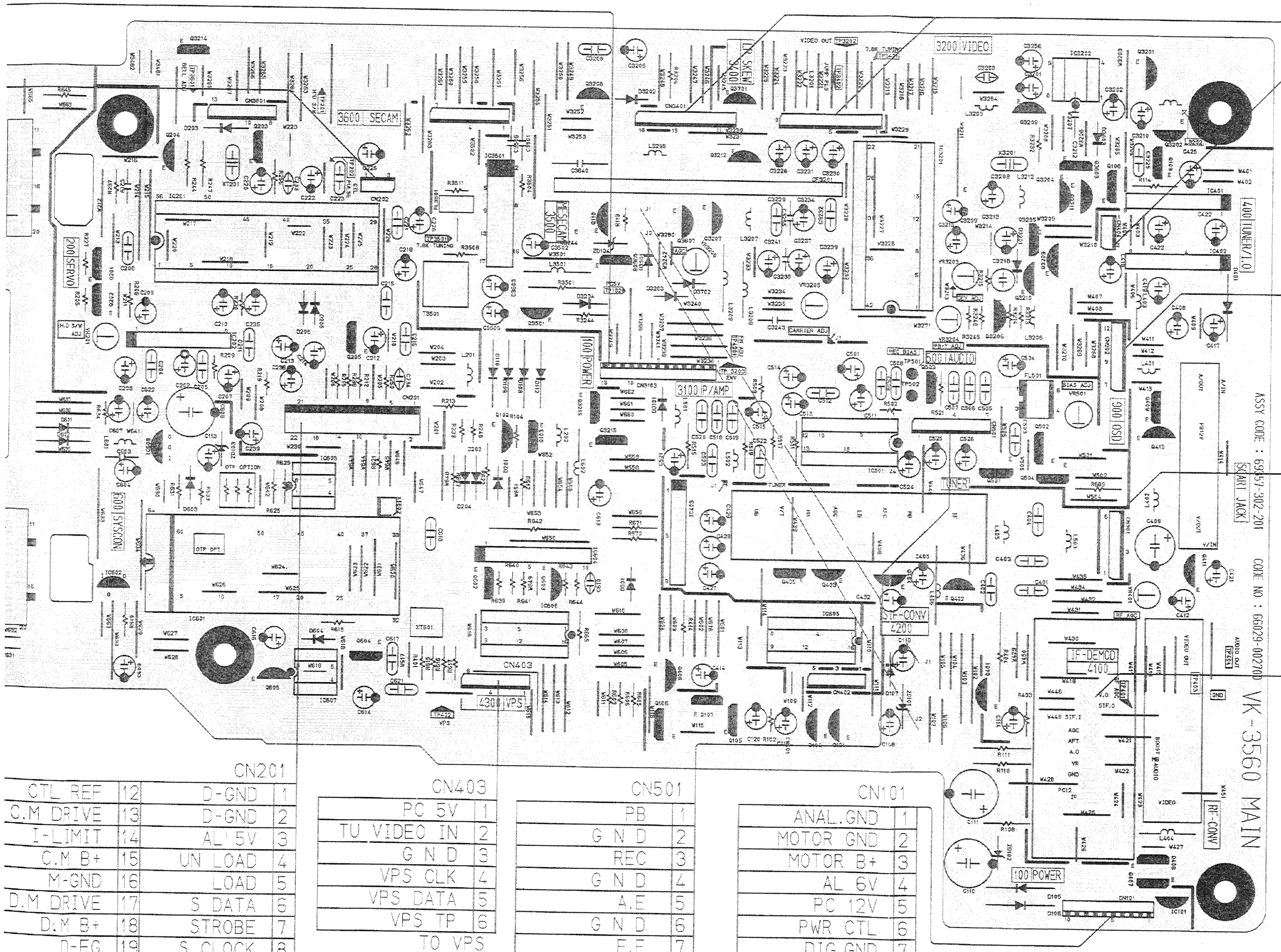
PB	1
G N D	2
REC	3
G N D	4
A.E	5
G N D	6
F.E	7

TO A/C HEAD
CN6206

CN101

ANAL.GND	1
MOTOR GND	2
MOTOR B+	3
AL 6V	4
PC 12V	5
PWR CTL	6
DIG.GND	7
AC 30V	8
AC 3.4V	9
AC 3.4V	10

TO REGULATOR
CN100


VK-3560 MAIN
ASSY CODE : 69357-302-201
CODE NO : 66029-00270
200 SERVO
3600 SECAM
3500 M.SECAM
3400 SKEW
3200 VIDEO
400 TUNER/I.O
100 POWER
3100 P/AMP
500 AUDIO
900 OSD
SCART JACK
600 SYSCON
4300 VPS
SIF-CONV 4200
IF-DEMOD 4100
RF-CONV
TUNER
CN201
CN403

CN404

G N D	1
VIDEO IN	2
AUDIO IN	3

TO TIMER
CN705

(VR4632/VR4631)

CN3401

N C	1
PC 12V	2
VIDEO OUT	3
VIDEO IN	4
N C	5
N C	6
G N D	7

TO BUFFER
CN3801

CN902

SYNC. DET	1
VIDEO OUT	2
AL 5V	3
G N D	4
VIDEO IN	5
C-SYNC	6
PC 12V	7
SECAM 'H'	8
MESECAM 'H'	9
S. CLOCK	10
STROBE	11
S.DATA	12

TO OSD
CN901

(VR4633)

CN3401

TEST POINT	1
PC 5V	2
SKEW. V. OUT	3
SKEW. V. IN	4
TEST POINT	5
C-SYNK	6
G N D	7
PC 5V	8
D' LY PB 5V	9
LP 'H'	10
NTSC 'H'	11
MESECAM 'H'	12
SECAM 'H'	13
SKEW.C.OUT	14
LP TRICK 'H'	15
SKEW.C.IN	16
APC ERROR	17
Fsc	18

TO LP SKEW
CN3402

CN401

VIDEO OUT	1
SIF OUT	2
SIF.CONV.IN	3
AGC	4
AFT	5
AUDIO OUT	6
RF AGC VR	7
G N D	8
PC 12V	9
IF IN	10

TO IF-PACK
CN4101

CN201

CTL REF	12	D-GND	1
C.M DRIVE	13	D-GND	2
I-LIMIT	14	AL'5V	3
C.M B+	15	UN LOAD	4
M-GND	16	LOAD	5
D.M DRIVE	17	S DATA	6
D.M B+	18	STROBE	7
D-FG	19	S CLOCK	8
D-GND	20	PC 5V	9
D-PG	21	C.M F/A	10
N C	22	C-FG	11

TO DECK JOINT
CN6202

CN403

PC 5V	1
TU VIDEO IN	2
G N D	3
VPS CLK	4
VPS DATA	5
VPS TP	6

TO VPS
CN4301

CN501

PB	1
G N D	2
REC	3
G N D	4
A.E	5
G N D	6
F.E	7

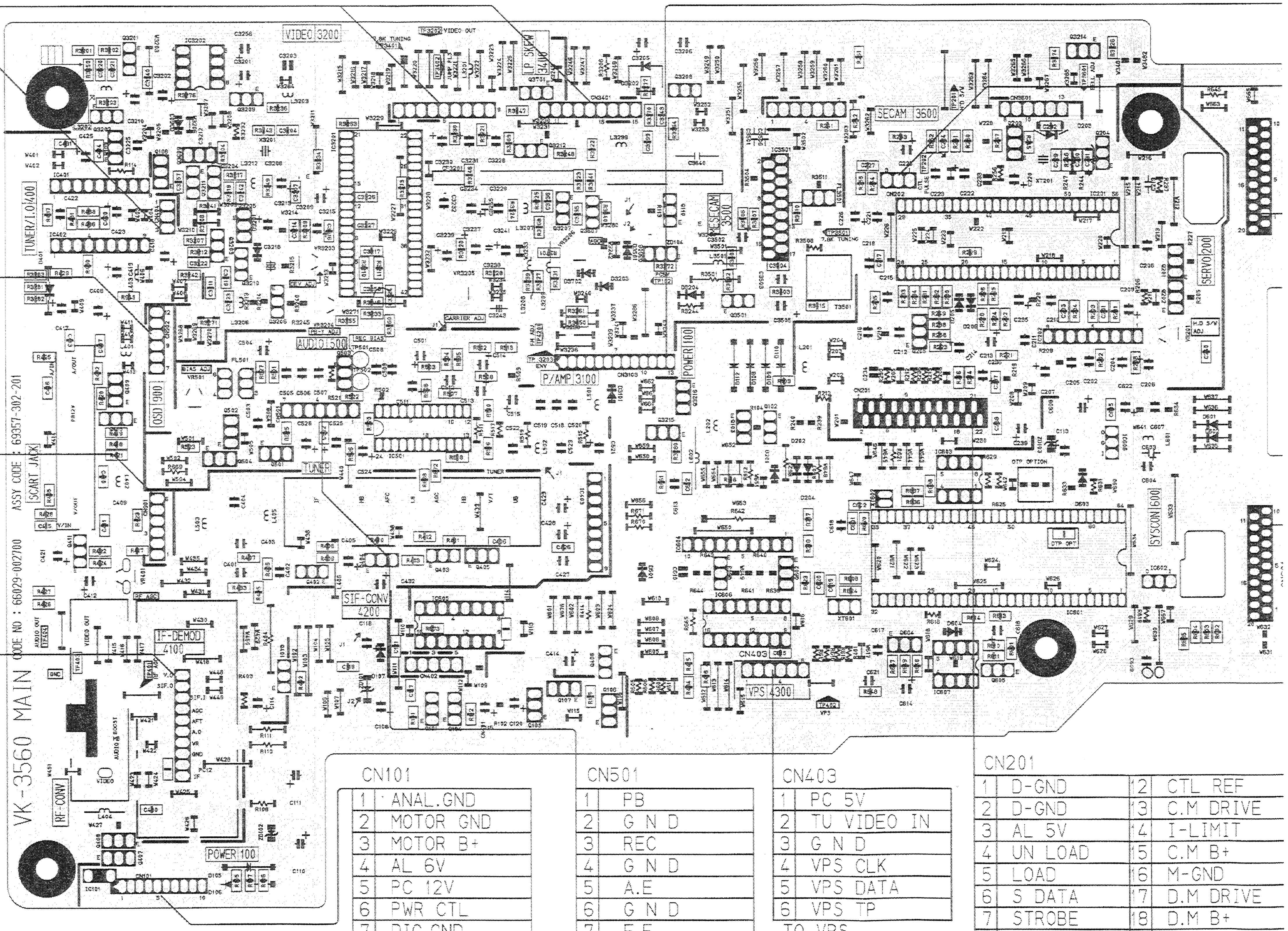
TO A/C HEAD
CN6206

CN101

ANAL.GND	1
MOTOR GND	2
MOTOR B+	3
AL 6V	4
PC 12V	5
PWR CTL	6
DIG.GND	7
AC 30V	8
AC 3.4V	9
AC 3.4V	10

TO REGULATOR
CN100

9-10. Main (Bottom Side)


VK-3560 MAIN
ASSY CODE : 69357-302-201
CODE NO : 66029-002700
VIDEO 3200
LP SKEW 3400
SECAM 3500
MESECAM 3500
SECAM 3600
TUNER/L0400
OSD 900
SCART JACK
AUDIO 1500
P/AMP 3100
POWER 100
SERVO 200
SYSCON 600
TUNER
SIF-CONV 4200
IF-DEMOD 4100
RF-CONV
VPS 4300
CN403
POWER 100

(VR4632/VR4631)

CN3401

1	N C
2	PC 12V
3	VIDEO OUT
4	VIDEO IN
5	N C
6	N C
7	G N D

TO BUFFER
CN3801

(VR4633)

CN3401

1	TEST POINT
2	PC 5V
3	SKEW. V. OUT
4	SKEW. V. IN
5	TEST POINT
6	C-SYNK
7	G N D
8	PC 5V
9	D' LY PB 5V
10	LP 'H'
11	NTSC 'H'
12	MESECAM 'H'
13	SECAM 'H'
14	SKEW.C.OUT
15	LP TRICK 'H'
16	SKEW.C.IN
17	APC ERROR
18	Fsc

TO LP SKEW
CN3402

CN404

1	G N D
2	VIDEO IN
3	AUDIO IN

TO TIMER
CN705

CN902

1	SYNC. DET
2	VIDEO OUT
3	AL 5V
4	G N D
5	VIDEO IN
6	C-SYNC
7	PC 12V
8	SECAM 'H'
9	MESECAM 'H'
10	S. CLOCK
11	STROBE
12	S.DATA

TO OSD
CN901

CN401

1	VIDEO OUT
2	SIF OUT
3	SIF.CONV.IN
4	AGC
5	AFT
6	AUDIO OUT
7	RF AGC VR
8	G N D
9	PC 12V
10	IF IN

TO IF-PACK
CN4101

CN101

1	ANAL.GND
2	MOTOR GND
3	MOTOR B+
4	AL 6V
5	PC 12V
6	PWR CTL
7	DIG.GND
8	AC 30V
9	AC 3.4V
10	AC 3.4V

TO REGULATOR
CN100

CN501

1	PB
2	G N D
3	REC
4	G N D
5	A.E
6	G N D
7	F.E

TO A/C HEAD
CN6206

CN403

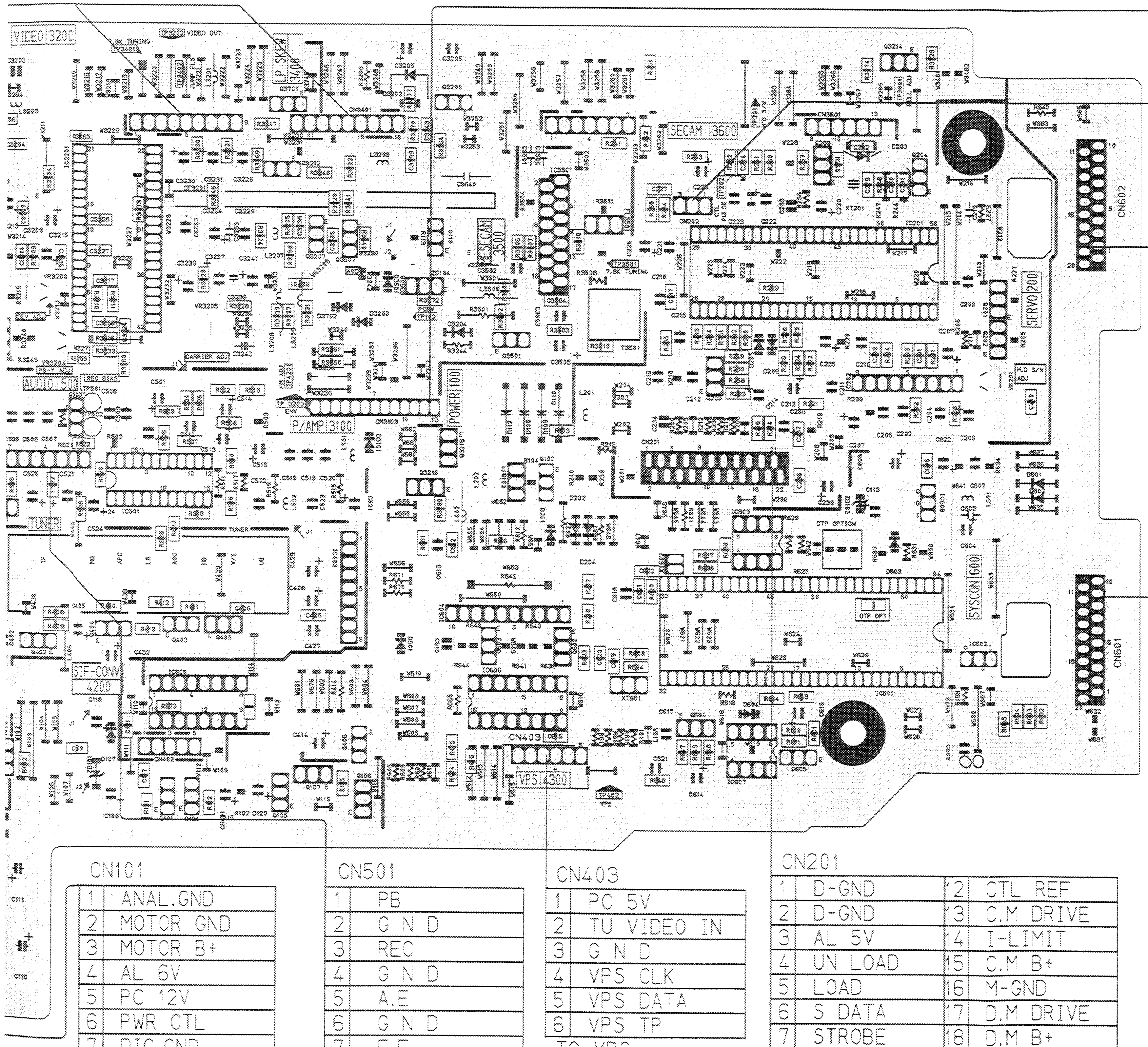
1	PC 5V
2	TU VIDEO IN
3	G N D
4	VPS CLK
5	VPS DATA
6	VPS TP

TO VPS
CN4301

CN201

1	D-GND	12	CTL REF
2	D-GND	13	C.M DRIVE
3	AL 5V	14	I-LIMIT
4	UN LOAD	15	C.M B+
5	LOAD	16	M-GND
6	S DATA	17	D.M DRIVE
7	STROBE	18	D.M B+
8	S CLOCK	19	D-FG
9	PC 5V	20	D-GND
10	C.M F/A	21	D-PG
11	C-FG	22	N C

TO DECK JOINT
CN6202


VIDEO 3200
LP SKEW 3400
SECAM 3600
SECAM 3500
SERVO 200
POWER 100
P/AMP 3100
AUDIO 1500
TUNER
SIF-CONV 4200
VPS 4300
SYSCON 600
CN202
CN602
CN601
IC201
IC601

CN202

1	GND
2	CTL(+)
3	CTL(-)

TO A/C HEAD

CN601

1	REMOCON
2	AC 3.4V
3	AC 3.4V
4	PC 5V
5	AL 5V
6	G8
7	G7
8	G6
9	G5
10	G4
11	G3
12	G2
13	G1
14	S4
15	S3
16	S2
17	S1
18	KEY 1
19	KEY 2
20	KEY 3

TO TIMER
CN701

CN602

1	G11
2	G10
3	G9
4	N C
5	N C
6	N C
7	N C
8	MESECAM 'H'
9	SECAM 'H'
10	GND
11	PICTURE CTL
12	N C
13	S5
14	S6
15	S7
16	S8
17	S9
18	S10
19	G13
20	G14

TO TIMER
CN702

(VR4632/VR4631)

CN3103

1	REC C
2	PB FM C
3	GND
4	PB FM Y
5	REC Y
6	GND
7	REC 'H'
8	H'D SW 25
9	ENVE DET
10	PC 5V
11	TRICK 'H'

TO PRE/AMP
CN3102

(VR4633)

CN3103

1	REC C
2	PB FM C
3	GND
4	PB FM Y
5	REC Y
6	GND
7	PB C(Envelope)
8	'H'D SW
9	FM DET
10	PC 5V
11	TRICK 'H'
12	'H'D AMP SW
13	ENVE COMP

TO PRE/AMP
CN3102

CN101

1	ANAL.GND
2	MOTOR GND
3	MOTOR B+
4	AL 6V
5	PC 12V
6	PWR CTL
7	DIG.GND
8	AC 30V
9	AC 3.4V
10	AC 3.4V

TO REGULATOR
CN100

CN501

1	PB
2	GND
3	REC
4	GND
5	A.E
6	GND
7	F.E

TO A/C HEAD
CN6206

CN403

1	PC 5V
2	TU VIDEO IN
3	GND
4	VPS CLK
5	VPS DATA
6	VPS TP

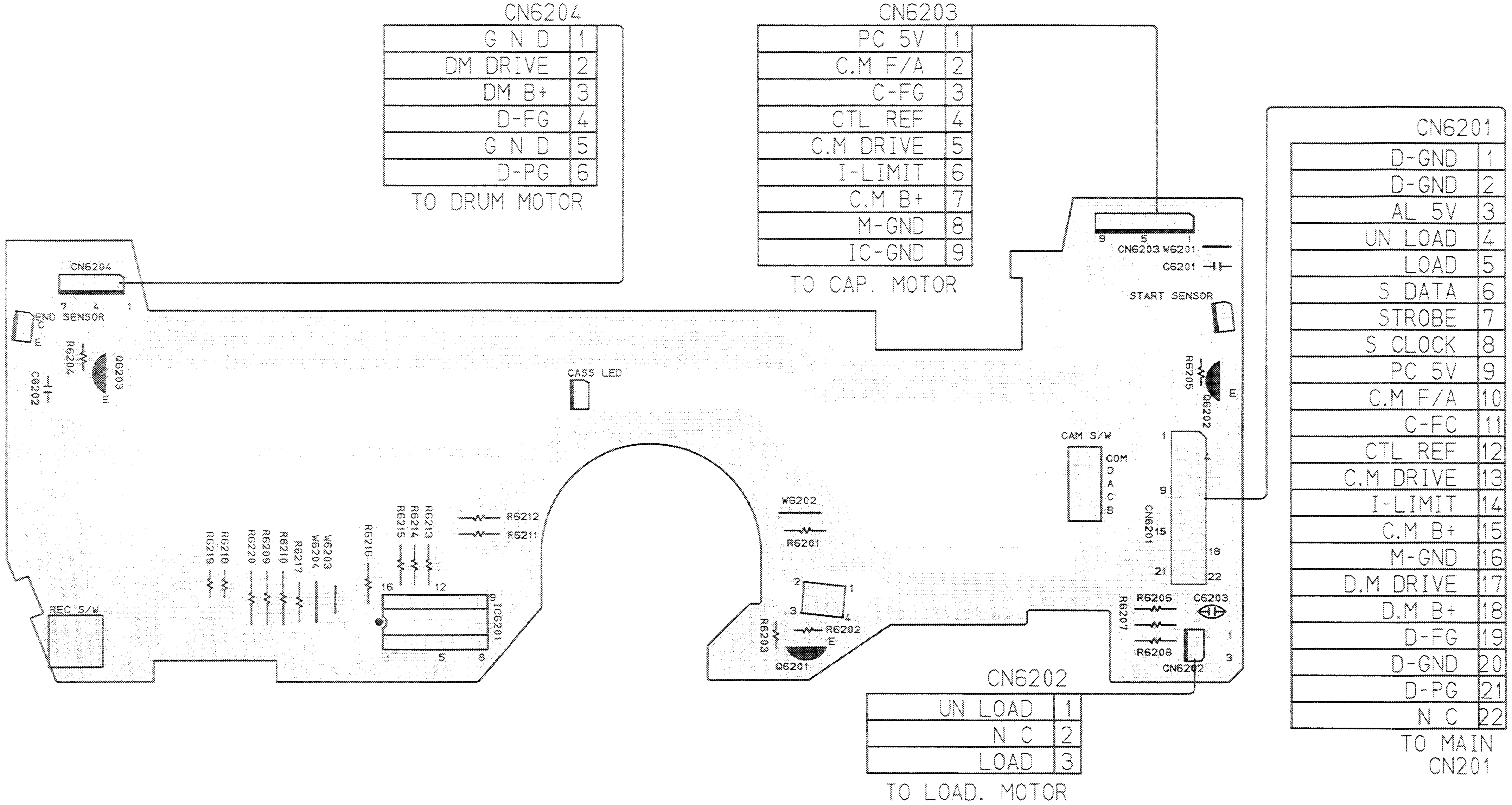
TO VPS
CN4301

CN201

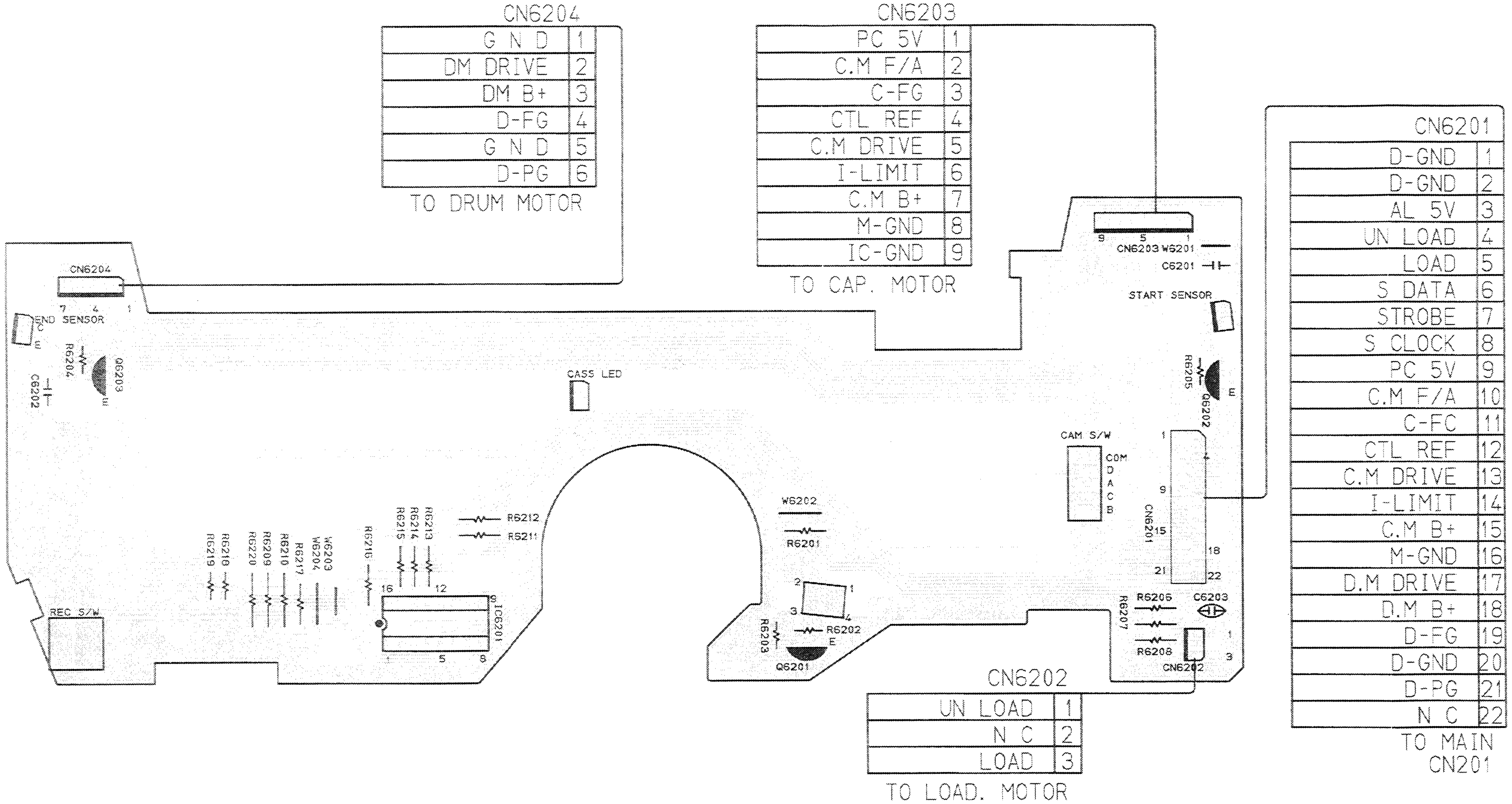
1	D-GND	12	CTL REF
2	D-GND	13	C.M DRIVE
3	AL 5V	14	I-LIMIT
4	UN LOAD	15	C.M B+
5	LOAD	16	M-GND
6	S DATA	17	D.M DRIVE
7	STROBE	18	D.M B+
8	S CLOCK	19	D-FG
9	PC 5V	20	D-GND
10	C.M F/A	21	D-PG
11	C-FG	22	N C

TO DECK JOINT
CN6202

9-11. Deck Joint (Top Side)


CN6204
G N D 1
DM DRIVE 2
DM B+ 3
D-FG 4
G N D 5
D-PG 6
TO DRUM MOTOR
CN6203
PC 5V 1
C.M F/A 2
C-FG 3
CTL REF 4
C.M DRIVE 5
I-LIMIT 6
C.M B+ 7
M-GND 8
IC-GND 9
TO CAP. MOTOR
CN6201
D-GND 1
D-GND 2
AL 5V 3
UN LOAD 4
LOAD 5
S DATA 6
STROBE 7
S CLOCK 8
PC 5V 9
C.M F/A 10
C-FC 11
CTL REF 12
C.M DRIVE 13
I-LIMIT 14
C.M B+ 15
M-GND 16
D.M DRIVE 17
D.M B+ 18
D-FG 19
D-GND 20
D-PG 21
N C 22
TO MAIN CN201
CN6202
UN LOAD 1
N C 2
LOAD 3
TO LOAD. MOTOR
CN6204
7
4
1
END SENSOR
C
E
R6204
Q6203
E
C6202
CASS LED
R6219
R6210
R6220
R6209
R6210
R6217
W6204
W6203
R6216
R6215
R6214
R6213
R6212
R6211
16
12
9
IC6201
1
5
8
REC S/W
CN6203
9
5
1
W6201
C6201
START SENSOR
R6205
Q6202
E
CAM S/W
COM
D
A
C
B
CN6201
1
4
9
15
18
21
22
W6202
R6201
2
1
3
4
R6202
E
R6203
Q6201
R6206
R6207
R6208
C6203
CN6202
1
3

9-11. Deck Joint (Top Side)


CN6204
7
4
1
END SENSOR
C
E
R6204
Q6203
E
C6202
CASS LED
REC S/W
R6219
R6210
R6220
R6209
R6210
R6217
W6204
W6203
R6216
R6215
R6214
R6213
R6212
R5211
16
12
9
IC6201
1
5
8
W6202
R6201
2
1
3
4
R6202
E
R6203
Q6201
9
5
1
CN6203
W6201
C6201
START SENSOR
R6205
Q6202
E
CAM S/W
COM
D
A
C
B
1
4
9
CN6201
15
18
21
22
R6206
C6203
R6207
R6208
CN6202
1
3

CN6204

G N D	1
DM DRIVE	2
DM B+	3
D-FG	4
G N D	5
D-PG	6

TO DRUM MOTOR

CN6203

PC 5V	1
C.M F/A	2
C-FG	3
CTL REF	4
C.M DRIVE	5
I-LIMIT	6
C.M B+	7
M-GND	8
IC-GND	9

TO CAP. MOTOR

CN6201

D-GND	1
D-GND	2
AL 5V	3
UN LOAD	4
LOAD	5
S DATA	6
STROBE	7
S CLOCK	8
PC 5V	9
C.M F/A	10
C-FC	11
CTL REF	12
C.M DRIVE	13
I-LIMIT	14
C.M B+	15
M-GND	16
D.M DRIVE	17
D.M B+	18
D-FG	19
D-GND	20
D-PG	21
N C	22

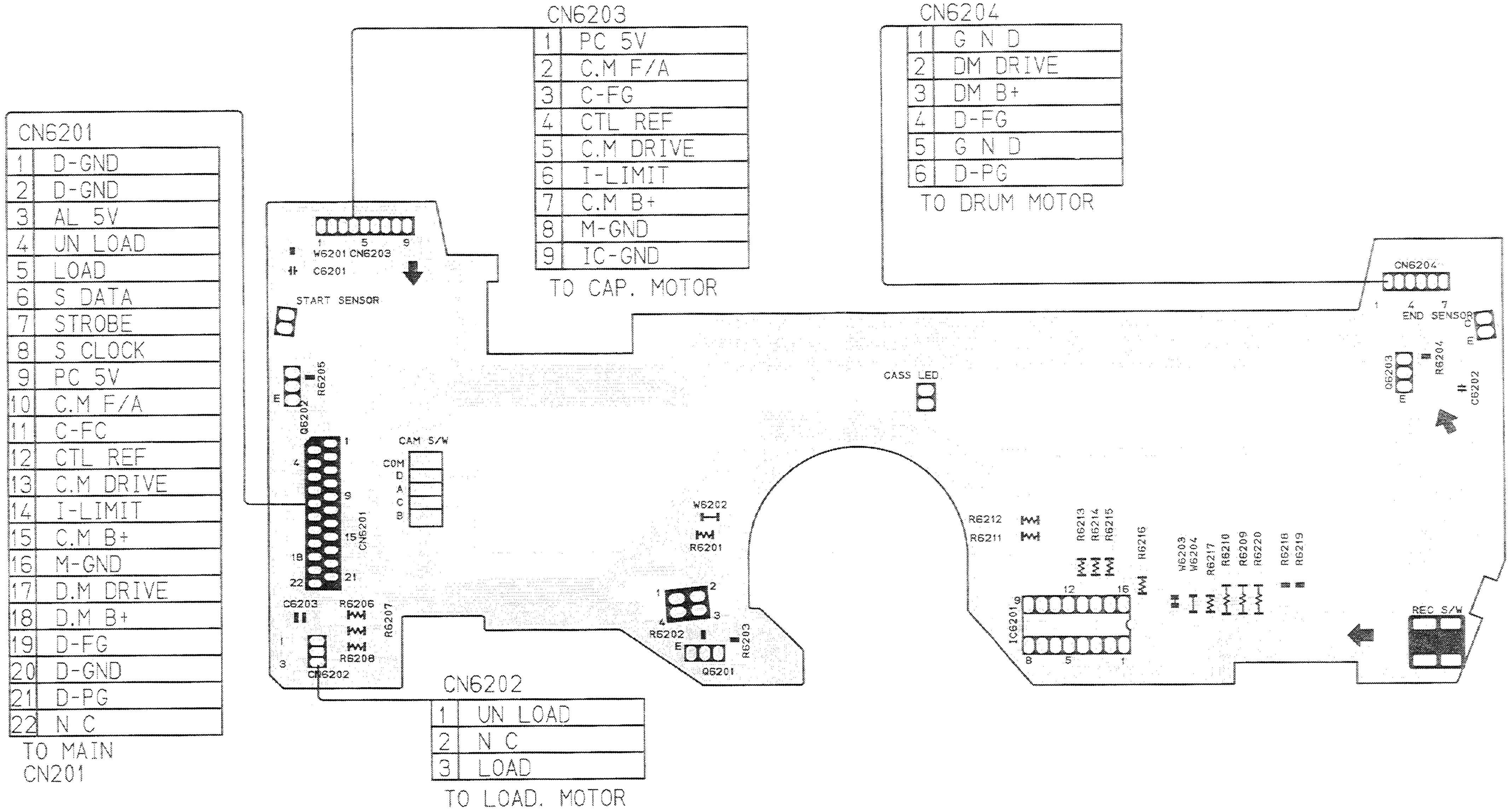
TO MAIN CN201

CN6202

UN LOAD	1
N C	2
LOAD	3

TO LOAD. MOTOR

9-11. Deck Joint (Bottom Side)


W6201 CN6203
C6201
START SENSOR
R6205
Q6202
CAM S/W
COM
D
A
C
B
CN6201
C6203
R6206
R6207
R6208
CN6202
W6202
R6201
R6202
Q6201
R6203
CASS LED
R6212
R6211
R6213
R6214
R6215
R6216
IC6201
W6203
W6204
R6217
R6210
R6209
R6220
R6218
R6219
REC S/W
CN6204
END SENSOR
Q6203
R6204
C6202

CN6201

1	D-GND
2	D-GND
3	AL 5V
4	UN LOAD
5	LOAD
6	S DATA
7	STROBE
8	S CLOCK
9	PC 5V
10	C.M F/A
11	C-FG
12	CTL REF
13	C.M DRIVE
14	I-LIMIT
15	C.M B+
16	M-GND
17	D.M DRIVE
18	D.M B+
19	D-FG
20	D-GND
21	D-PG
22	N C

TO MAIN
CN201

CN6203

1	PC 5V
2	C.M F/A
3	C-FG
4	CTL REF
5	C.M DRIVE
6	I-LIMIT
7	C.M B+
8	M-GND
9	IC-GND

TO CAP. MOTOR

CN6204

1	G N D
2	DM DRIVE
3	DM B+
4	D-FG
5	G N D
6	D-PG

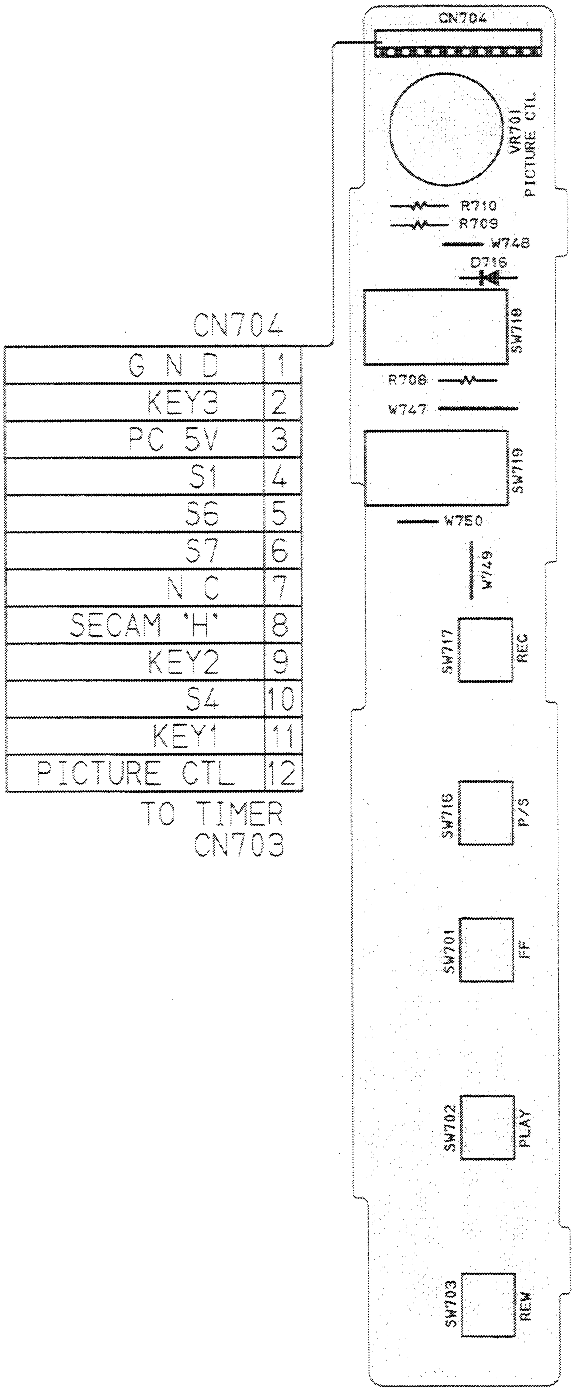
TO DRUM MOTOR

CN6202

1	UN LOAD
2	N C
3	LOAD

TO LOAD. MOTOR

9-12. Function (Top Side)

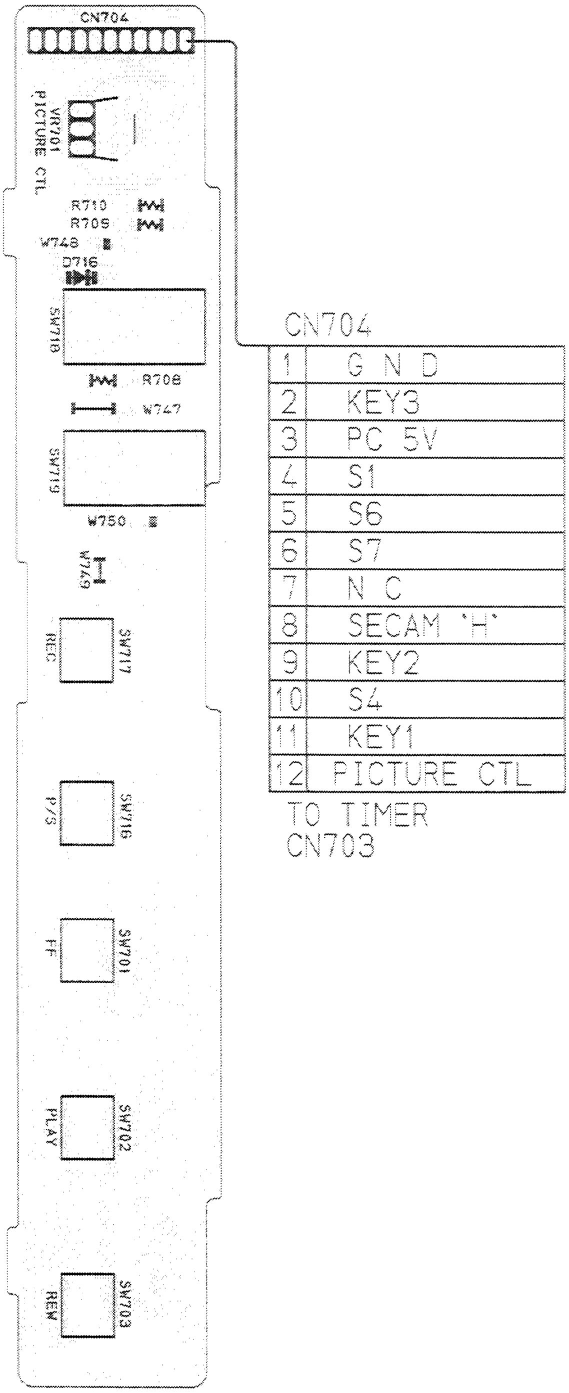

CN704
VR701 PICTURE CTL
R710
R709
W748
D716
SW718
R708
W747
SW719
W750
W749
SW717
REC
SW716
P/S
SW701
FF
SW702
PLAY
SW703
REW

CN704

G N D	1
KEY3	2
PC 5V	3
S1	4
S6	5
S7	6
N C	7
SECAM 'H'	8
KEY2	9
S4	10
KEY1	11
PICTURE CTL	12

TO TIMER
CN703

9-12. Function (Bottom Side)

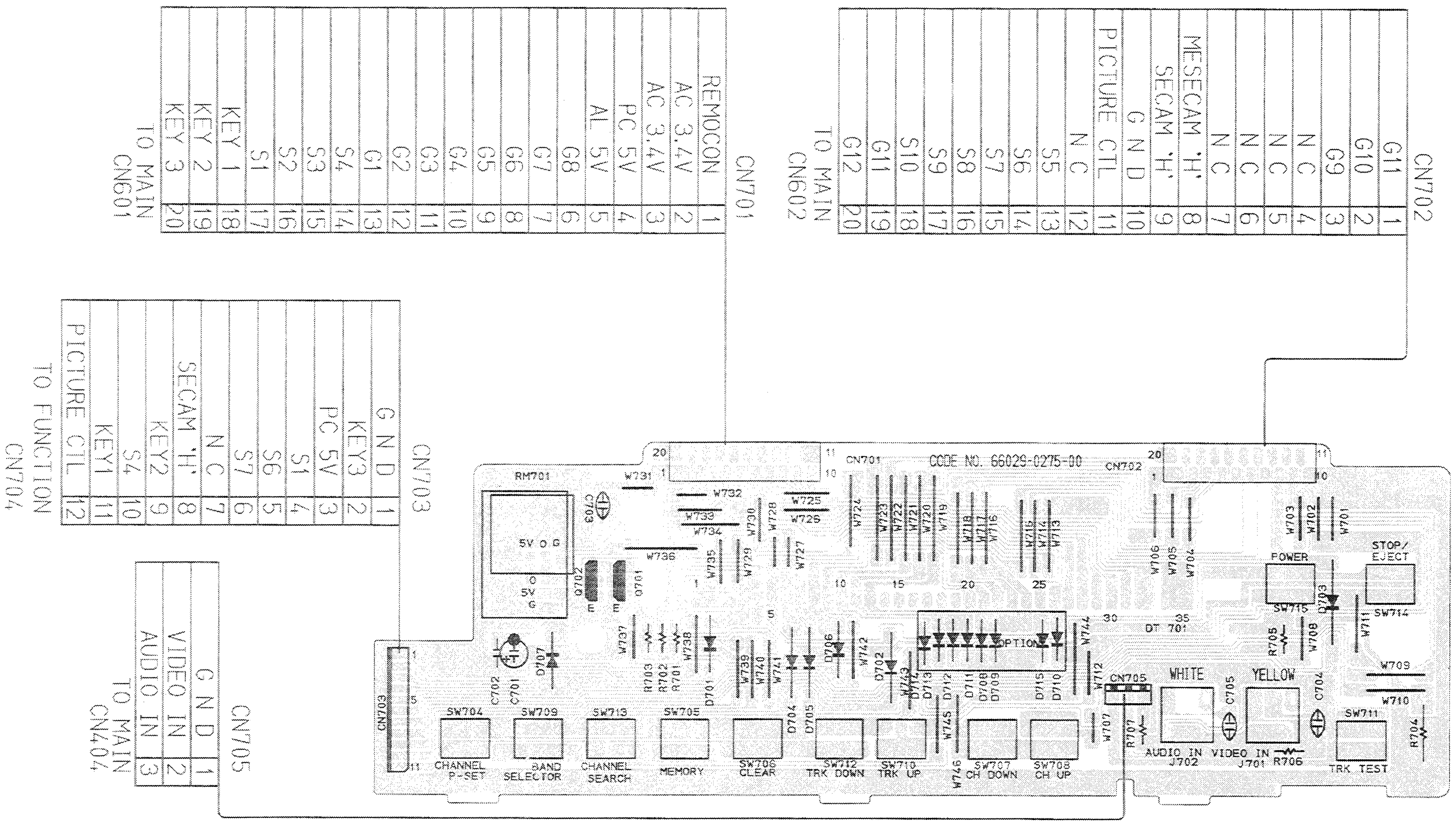

CN704
VR701
PICTURE CTL
R710
R709
W748
D716
SW718
R708
W747
SW719
W750
W749
SW717
REC
SW716
P/S
SW701
FF
SW702
PLAY
SW703
REW

CN704

1	G N D
2	KEY3
3	PC 5V
4	S1
5	S6
6	S7
7	N C
8	SECAM 'H'
9	KEY2
10	S4
11	KEY1
12	PICTURE CTL

TO TIMER
CN703

9-13. Timer (Top Side)


CN701
1 REMOCON
2 AC 3.4V
3 AC 3.4V
4 PC 5V
5 AL 5V
6 G8
7 G7
8 G6
9 G5
10 G4
11 G3
12 G2
13 G1
14 S4
15 S3
16 S2
17 S1
18 KEY 1
19 KEY 2
20 KEY 3
TO MAIN CN601
CN702
1 G11
2 G10
3 G9
4 N C
5 N C
6 N C
7 N C
8 MESECAM 'H'
9 SECAM 'H'
10 G N D
11 PICTURE CTL
12 N C
13 S5
14 S6
15 S7
16 S8
17 S9
18 S10
19 G11
20 G12
TO MAIN CN602
CN703
1 G N D
2 KEY3
3 PC 5V
4 S1
5 S6
6 S7
7 N C
8 SECAM 'H'
9 KEY2
10 S4
11 KEY1
12 PICTURE CTL
TO FUNCTION CN704
CN705
1 G N D
2 VIDEO IN
3 AUDIO IN
TO MAIN CN404
CODE NO. 66029-0275-00
RM701
5V O G
POWER
STOP/EJECT
SW715
SW714
SW711
DT 701
OPTION
WHITE
YELLOW
AUDIO IN J702
VIDEO IN J701
SW704 CHANNEL P-SET
SW709 BAND SELECTOR
SW713 CHANNEL SEARCH
SW705 MEMORY
SW706 CLEAR
SW712 TRK DOWN
SW710 TRK UP
SW707 CH DOWN
SW708 CH UP
TRK TEST

9-13. Timer (Bottom Side)

CN702

1	G11
2	G10
3	G9
4	N C
5	N C
6	N C
7	N C
8	MESECAM 'H'
9	SECAM 'H'
10	G N D
11	PICTURE CTL
12	N C
13	S5
14	S6
15	S7
16	S8
17	S9
18	S10
19	G11
20	G12

TO MAIN
CN602

CN701

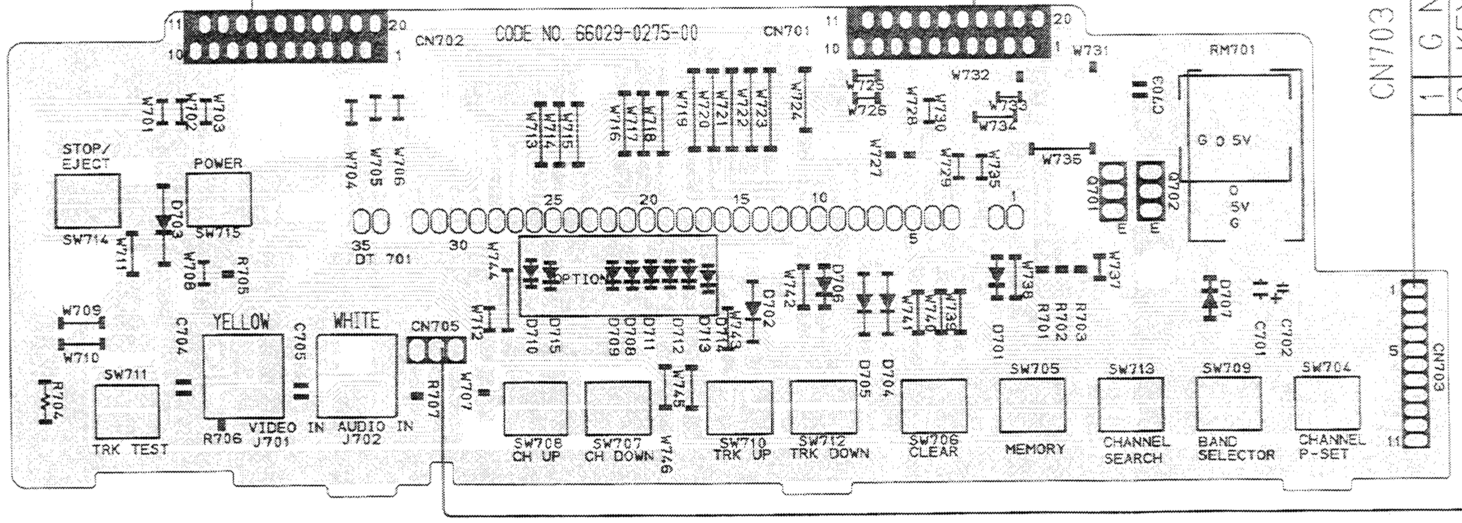
1	REMOCON
2	AC 3.4V
3	AC 3.4V
4	PC 5V
5	AL 5V
6	G8
7	G7
8	G6
9	G5
10	G4
11	G3
12	G2
13	G1
14	S4
15	S3
16	S2
17	S1
18	KEY 1
19	KEY 2
20	KEY 3

TO MAIN
CN601

CN703

1	G N D
2	KEY3
3	PC 5V
4	S1
5	S6
6	S7
7	N C
8	SECAM 'H'
9	KEY2
10	S4
11	KEY1
12	PICTURE CTL

TO FUNCTION
CN704


CN702
CODE NO. 66029-0275-00
CN701
11
20
10
1
W701
W702
W703
W704
W705
W706
W713
W714
W715
W716
W717
W718
W719
W720
W721
W722
W723
W724
W725
W726
W727
W728
W729
W730
W731
W732
W733
W734
W735
W736
W737
W738
W739
W740
W741
W742
W743
W744
W745
W746
W707
W708
W709
W710
W711
W712
STOP/
EJECT
SW714
POWER
SW715
D703
R705
35
30
25
20
15
10
5
DT 701
OPTION
D710
D715
D709
D708
D711
D712
D713
D714
D702
D706
D705
D704
D701
D707
R701
R702
R703
RM701
G O 5V
O
5V
G
Q701
Q702
E
C703
C701
C702
CN703
YELLOW
WHITE
C704
C705
CN705
R707
R704
SW711
TRK TEST
R706
VIDEO IN
J701
AUDIO IN
J702
SW708
CH UP
SW707
CH DOWN
SW710
TRK UP
SW712
TRK DOWN
SW706
CLEAR
SW705
MEMORY
SW713
CHANNEL
SEARCH
SW709
BAND
SELECTOR
SW704
CHANNEL
P-SET

CN705

1	G N D
2	VIDEO IN
3	AUDIO IN

TO MAIN
CN404

10. SCHEMATIC DIAGRAMS

Page

10-1. Regulator ------------------------ 10-2

10-2. Power --------------------------- 10-3

10-3. System Control -------------------- 10-4

10-4. Servo 1 (IC201 : HD49748NT) ---------- 10-6

10-5. Servo 2 (IC201 : KA8319) ------------- 10-7

10-6. Video (4H'd : VR4633) --------------- 10-8

10-7. Video/Buffer (2H'd : VR4632/VR4631) --- 10-9

10-8. Audio -------------------------- 10-12

10-9. Pre-Amp (4H'd : VR4633) ------------ 10-14

10-10. Pre-Amp (2H'd : VR4632/VR4631) ------ 10-16

10-11. Tuner/IF-PACK/VPS ---------------- 10-18

10-12. LP SKEW (Only for VR4633) ---------- 10-19

10-13. O.S.D -------------------------- 10-20

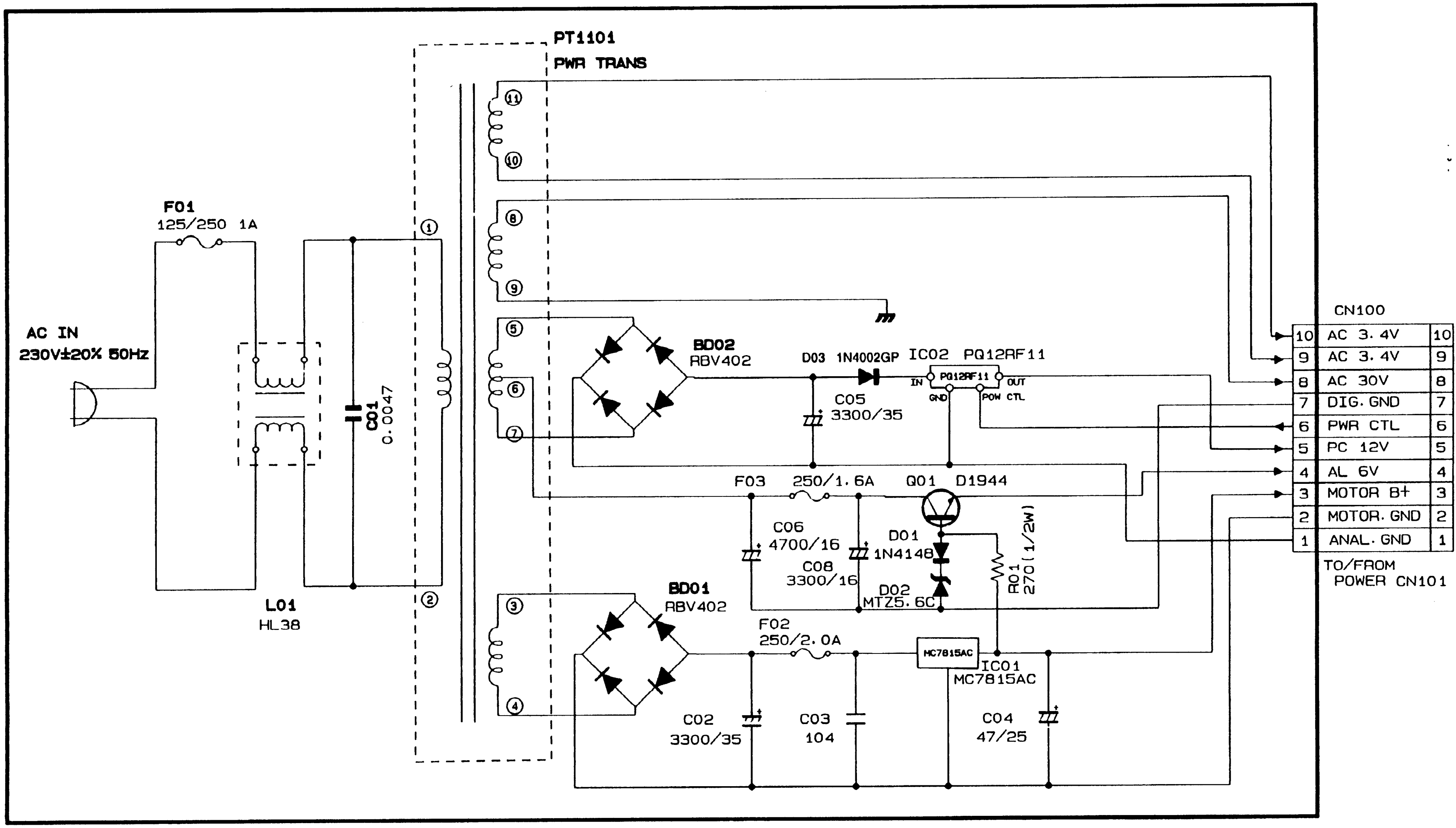
10-14. Function/Timer ------------------- 10-22

10-15. Deck Joint ---------------------- 10-23

10-16. LCD Remote Control (VR4633) -------- 10-24

10-17. W/O LCD Remote Control (VR4632/VR4631) 10-25

10-1. Regulator

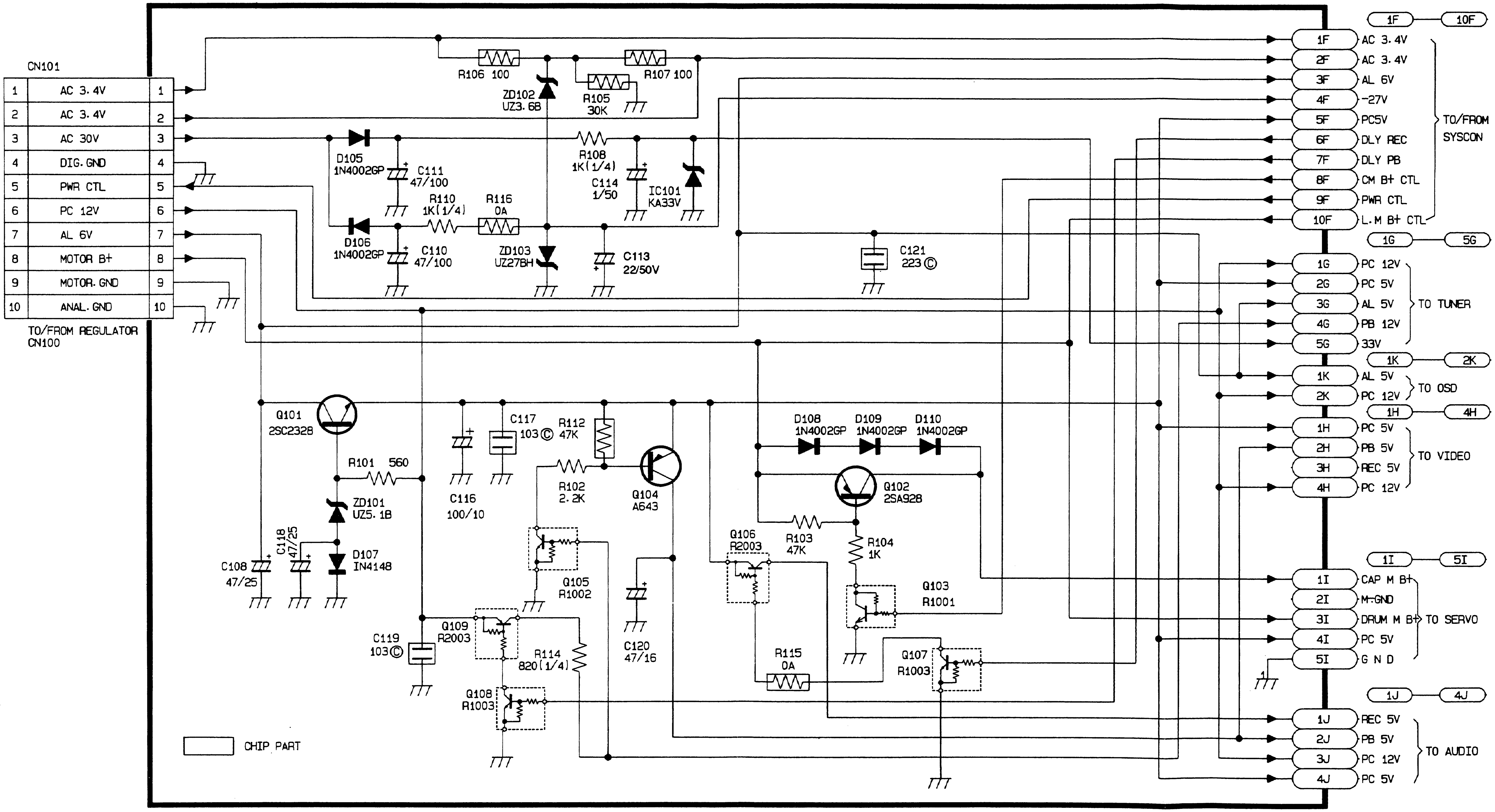

PT1101
PWR TRANS
AC IN
230V±20% 50Hz
F01
125/250 1A
C01
0.0047
L01
HL38
BD02
RBV402
D03 1N4002GP
IC02 PQ12RF11
PQ12RF11
IN
GND
OUT
POW CTL
C05
3300/35
F03
250/1.6A
Q01 D1944
C06
4700/16
C08
3300/16
D01
1N4148
D02
MTZ5.6C
R01
270(1/2W)
BD01
RBV402
F02
250/2.0A
MC7815AC
IC01
MC7815AC
C02
3300/35
C03
104
C04
47/25
CN100
10 AC 3.4V 10
9 AC 3.4V 9
8 AC 30V 8
7 DIG.GND 7
6 PWR CTL 6
5 PC 12V 5
4 AL 6V 4
3 MOTOR B+ 3
2 MOTOR.GND 2
1 ANAL.GND 1
TO/FROM
POWER CN101

SPECIAL NOTE
All integrated circuits and many other semiconductor devices are electrostatically sensitive and therefore require the special handling techniques described under the "electrostatically sensitive (ES) devices" section of this service manual.

NOTE
Do not use the part number shown on this drawing for ordering. The correct part number is shown in the parts list. And may be slightly different or amended since this drawing was prepared.

IMPORTANT SAFETY NOTICES
Components identified with the mark ⚠ have the special charateristics for safety when replacing any of these components. Use only the same type.

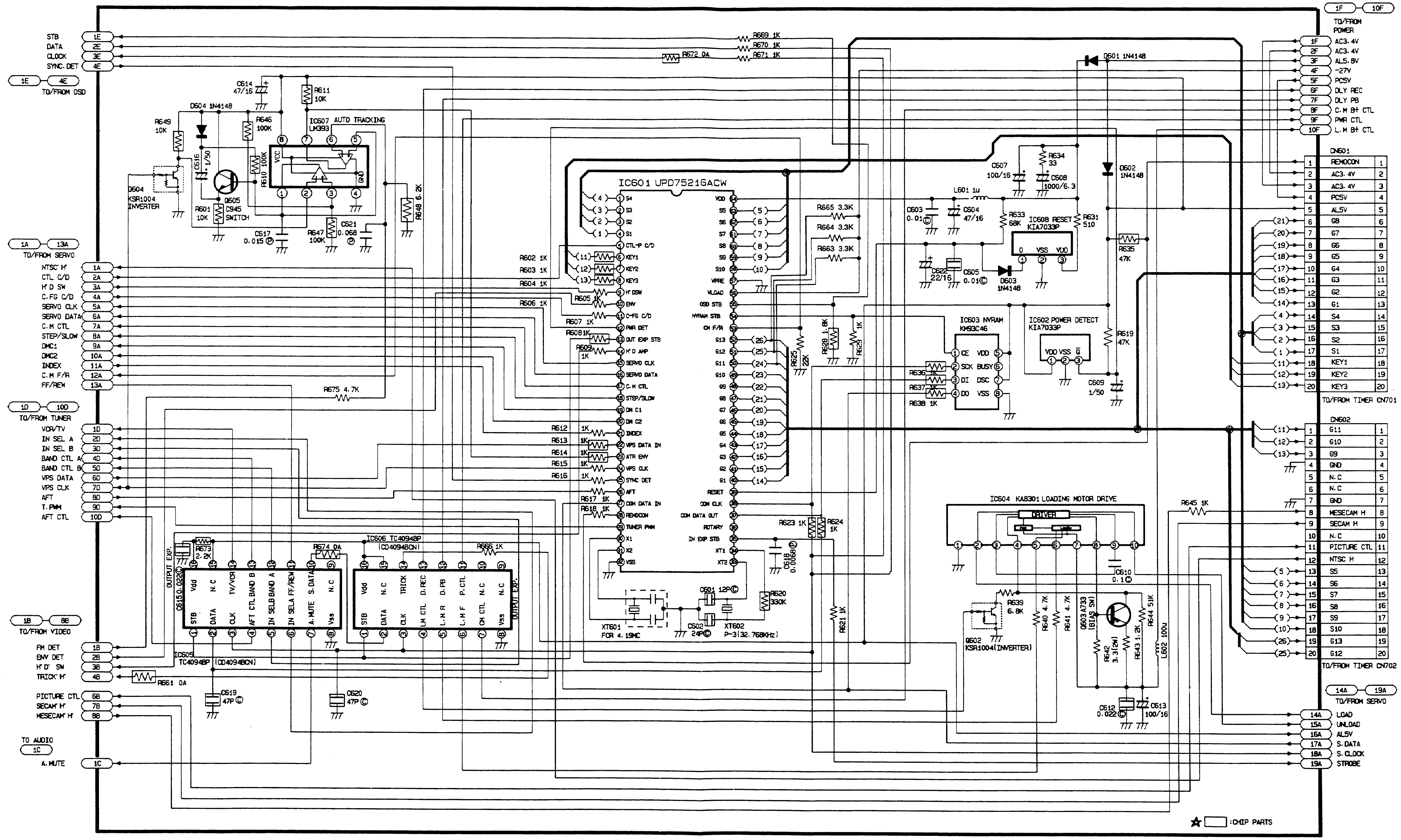
10-2. Power


CN101
1 AC 3.4V 1
2 AC 3.4V 2
3 AC 30V 3
4 DIG.GND 4
5 PWR CTL 5
6 PC 12V 6
7 AL 6V 7
8 MOTOR B+ 8
9 MOTOR.GND 9
10 ANAL.GND 10
TO/FROM REGULATOR CN100
R106 100
R107 100
ZD102 UZ3.6B
R105 30K
D105 1N4002GP
C111 47/100
R108 1K(1/4)
C114 1/50
IC101 KA33V
R110 1K(1/4)
R116 0A
D106 1N4002GP
C110 47/100
ZD103 UZ27BH
C113 22/50V
C121 223Ⓒ
Q101 2SC2328
R101 560
ZD101 UZ5.1B
D107 IN4148
C108 47/25
C118 47/25
C116 100/10
C117 103Ⓒ
R112 47K
R102 2.2K
Q104 A643
Q105 R1002
C119 103Ⓒ
Q109 R2003
R114 820(1/4)
Q108 R1003
C120 47/16
D108 1N4002GP
D109 1N4002GP
D110 1N4002GP
Q102 2SA928
Q106 R2003
R103 47K
R104 1K
Q103 R1001
R115 0A
Q107 R1003
CHIP PART
1F 10F
1F AC 3.4V
2F AC 3.4V
3F AL 6V
4F -27V
5F PC5V
6F DLY REC
7F DLY PB
8F CM B+ CTL
9F PWR CTL
10F L.M B+ CTL
TO/FROM SYSCON
1G 5G
1G PC 12V
2G PC 5V
3G AL 5V
4G PB 12V
5G 33V
TO TUNER
1K 2K
1K AL 5V
2K PC 12V
TO OSD
1H 4H
1H PC 5V
2H PB 5V
3H REC 5V
4H PC 12V
TO VIDEO
1I 5I
1I CAP M B+
2I M-GND
3I DRUM M B+
4I PC 5V
5I G N D
TO SERVO
1J 4J
1J REC 5V
2J PB 5V
3J PC 12V
4J PC 5V
TO AUDIO

SPECIAL NOTE
All integrated circuits and many other semiconductor devices are electrostatically sensitive and therefore require the special handling techniques described under the "electrostatically sensitive (ES) devices" section of this service manual.

NOTE
Do not use the part number shown on this drawing for ordering. The correct part number is shown in the parts list. And may be slightly different or amended since this drawing was prepared.

10-3. System Control


IC601 UPD7521GACW
IC607 AUTO TRACKING LM393
IC606 TC4094BP (CD4094BCN)
IC605 TC4094BP (CD4094BCN)
IC603 NVRAM KM93C46
IC602 POWER DETECT KIA7033P
IC608 RESET KIA7033P
IC604 KA8301 LOADING MOTOR DRIVE
DRIVER
Q604 KSR1004 INVERTER
Q605 C945 SWITCH
Q602 KSR1004(INVERTER)
Q603 A733 (BIAS SW)
XT601 FOR 4.19MC
XT602 P-3(32.768KHz)
D601 1N4148
D602 1N4148
D603 1N4148
D604 1N4148
L601 1u
L602 100u
1E 4E TO/FROM OSD
STB
DATA
CLOCK
SYNC.DET
1A 13A TO/FROM SERVO
NTSC'H'
CTL C/D
H'D SW
C.FG C/D
SERVO CLK
SERVO DATA
C.M CTL
STEP/SLOW
DMC1
DMC2
INDEX
C.M F/R
FF/REW
1D 10D TO/FROM TUNER
VCR/TV
IN SEL A
IN SEL B
BAND CTL A
BAND CTL B
VPS DATA
VPS CLK
AFT
T.PWM
AFT CTL
1B 8B TO/FROM VIDEO
FM DET
ENV DET
H'D' SW
TRICK'H'
PICTURE CTL
SECAM'H'
MESECAM'H'
TO AUDIO 1C
A.MUTE
1F 10F TO/FROM POWER
AC3.4V
AC3.4V
AL5.8V
-27V
PCSV
DLY REC
DLY PB
C.M B+ CTL
PWR CTL
L.M B+ CTL
CN501
REMOCON
AC3.4V
AC3.4V
PCSV
AL5V
G8
G7
G6
G5
G4
G3
G2
G1
S4
S3
S2
S1
KEY1
KEY2
KEY3
TO/FROM TIMER CN701
CN502
G11
G10
G9
GND
N.C
N.C
GND
MESECAM H
SECAM H
N.C
PICTURE CTL
NTSC H
S5
S6
S7
S8
S9
S10
G13
G12
TO/FROM TIMER CN702
14A 19A TO/FROM SERVO
LOAD
UNLOAD
AL5V
S.DATA
S.CLOCK
STROBE
OUTPUT EXP.
★ ▭ :CHIP PARTS

SPECIAL NOTE
All integrated circuits and many other semiconductor devices are electrostatically sensitive and therefore require the special handling techniques described under the "electrostatically sensitive (ES) devices" section of this service manual.

NOTE
Do not use the part number shown on this drawing for ordering. The correct part number is shown in the parts list. And may be slightly different or amended since this drawing was prepared.

IC601

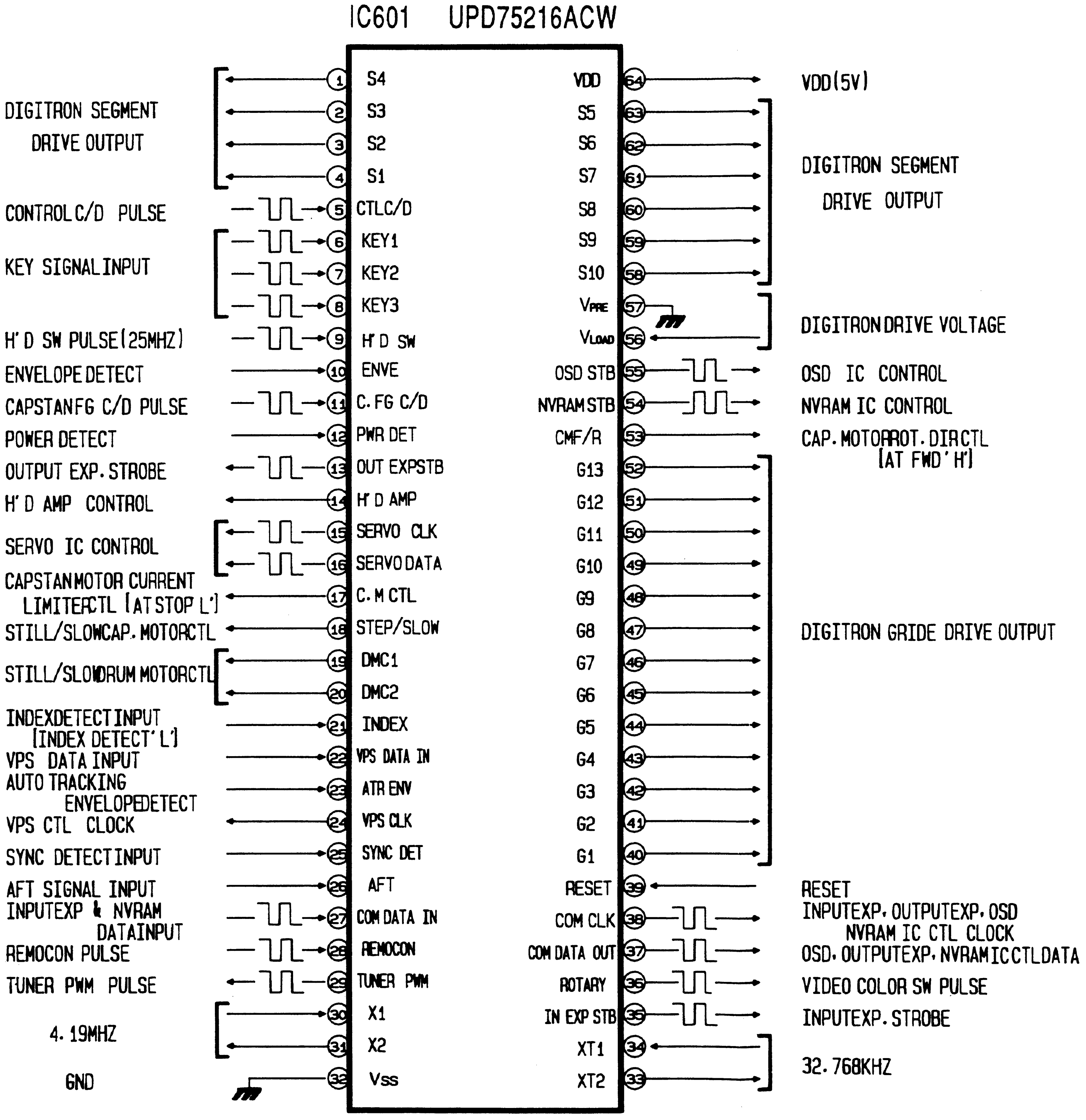
MODE PIN NO	STOP	REC	PLAY	MODE PIN NO	STOP	REC	PLAY
PIN 1	−15.7	−18.2	−22.5	PIN 33	1.5	1.5	1.5
PIN 2	−15.6	−20.5	−22.5	PIN 34	2.6	2.6	2.6
PIN 3	−15.6	−18.2	−18.2	PIN 35	5.2	4.2	4.2
PIN 4	−11.4	−16.1	−20.3	PIN 36	0	0.9−4.2	0.9−4.2
PIN 5	5.0	5.0	1.4−4.6	PIN 37	0	0.3	0.2
PIN 6	1.0	0.7	0.6	PIN 38	0	0.2	0.2
PIN 7	0.4	0	0.6	PIN 39	5.2	5.2	5.2
PIN 8	0.4	0	0.6	PIN 40	−23.4	−23.6	−23.8
PIN 9	0	0.9−4.2	0.9−4.2	PIN 41	−23.4	−23.6	−23.8
PIN 10	4.0	0	0	PIN 42	−23.4	−23.6	−23.8
PIN 11	0	2.5	2.5	PIN 43	−23.4	−23.6	−23.8
PIN 12	5.1	5.1	5.1	PIN 44	−23.4	−23.6	−23.8
PIN 13	0	0	0	PIN 45	−23.4	−23.6	−23.8
PIN 14	0	0	0	PIN 46	−23.4	−23.6	−23.8
PIN 15	0.2	0.2	0.2	PIN 47	−23.4	−23.6	−23.8
PIN 16	0.2	0.2	0.2	PIN 48	−23.4	−23.6	−23.8
PIN 17	0.1	4.9	5.0	PIN 49	−23.4	−23.6	−23.8
PIN 18	0	0	0	PIN 50	−23.4	−23.8	−24.0
PIN 19	2.4	2.4	2.4	PIN 51	−23.6	−23.8	−24.0
PIN 20	0.5	2.4	2.4	PIN 52	−23.6	−23.8	−24.0
PIN 21	5.0	5.0	5.0	PIN 53	5.2	5.2	5.2
PIN 22	5.0	5.0	5.0	PIN 54	0	0	0
PIN 23	5.2	5.1	5.1	PIN 55	5.1	5.1	5.1
PIN 24	5.2	5.2	5.1	PIN 56	−24.9	−25.1	−25.3
PIN 25	0	4.2	4.2	PIN 57	0	0	0
PIN 26	0	1.1	0	PIN 58	−22.7	−23.0	−23.0
PIN 27	0.6	4.8	4.8	PIN 59	−20.4	−22.8	−23.0
PIN 28	5.0	5.1	5.1	PIN 60	−20.4	−20.6	−23.0
PIN 29	4.5	2.6	4.5	PIN 61	−11.7	−9.4	−9.4
PIN 30	2.7	2.6	2.6	PIN 62	−13.9	−16.0	−16.0
PIN 31	2.8	2.8	2.8	PIN 63	−13.9	−11.7	−18.3
PIN 32	0	0	0	PIN 64	5.2	5.2	5.2

IC605

MODE PIN NO	STOP	REC	PLAY
PIN 1	0	0	0
PIN 2	0.1	0.4	0.3
PIN 3	0.1	0.3	0.3
PIN 4	0	0	0
PIN 5	0	0	0
PIN 6	0	0	0
PIN 7	5.0	0	0
PIN 8	0	0	0
PIN 9	0	0.3	0.2
PIN 10	0	0.3	0.2
PIN 11	0	0	0
PIN 12	4.7	4.7	4.7
PIN 13	0	4.7	0
PIN 14	5.0	5.0	5.0
PIN 15	5.0	5.0	5.0
PIN 16	5.0	5.0	5.0

IC606

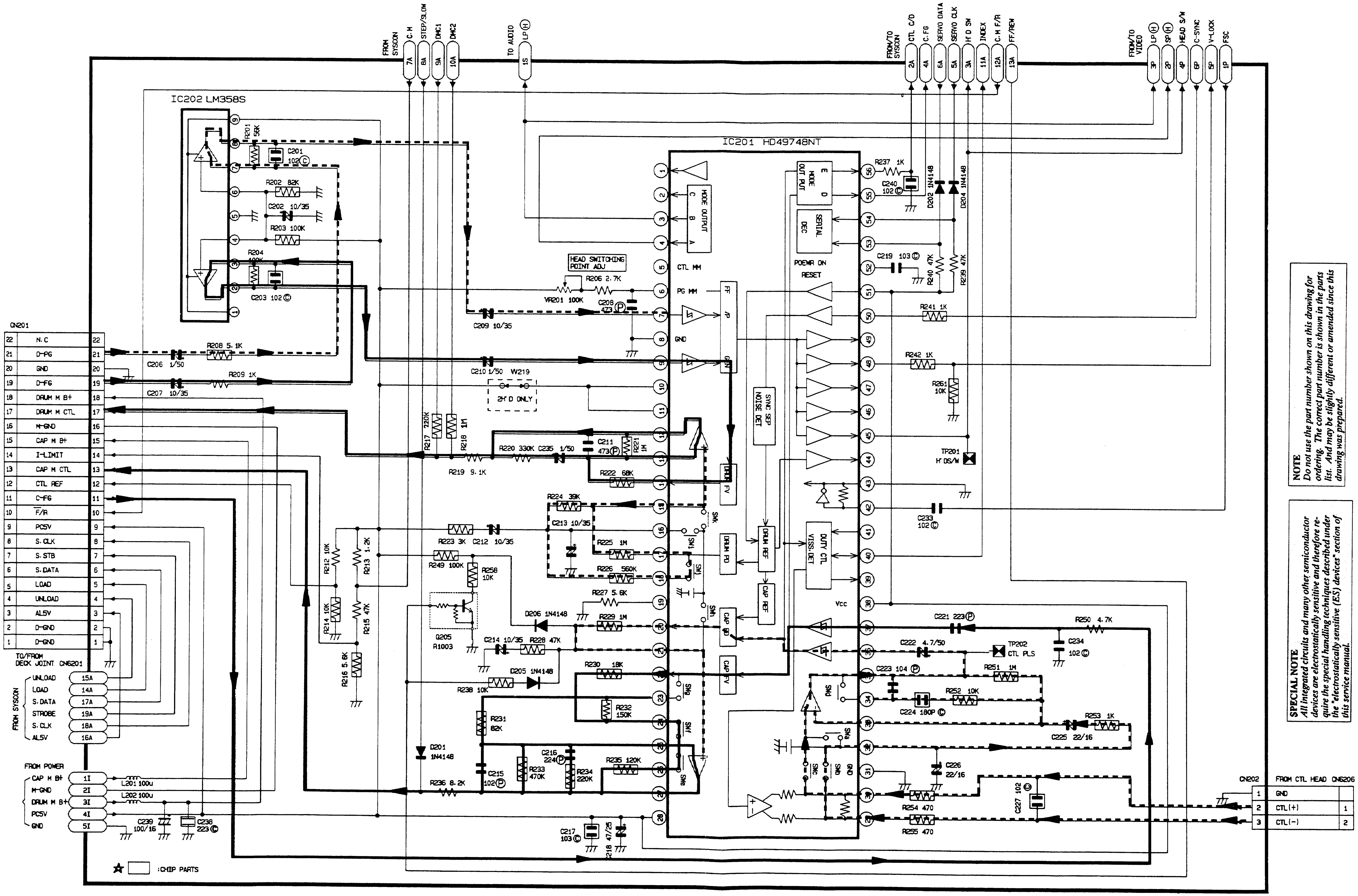
MODE PIN NO	STOP	REC	PLAY
PIN 1	0	0	0
PIN 2	0	0.3	0.2
PIN 3	0.1	0.3	0.3
PIN 4	5.1	5.1	5.1
PIN 5	4.9	4.9	4.9
PIN 6	4.9	4.9	4.9
PIN 7	0	0	0
PIN 8	0	0	0
PIN 9	5.2	4.1	4.1
PIN 10	5.2	4.1	4.1
PIN 11	5.2	5.2	5.2
PIN 12	0	0	5.0
PIN 13	0	5.1	0
PIN 14	5.1	0	0
PIN 15	5.2	5.2	5.2
PIN 16	5.2	5.2	5.2


IC601 UPD75216ACW
DIGITRON SEGMENT DRIVE OUTPUT
① S4
② S3
③ S2
④ S1
CONTROL C/D PULSE
⑤ CTLC/D
KEY SIGNAL INPUT
⑥ KEY1
⑦ KEY2
⑧ KEY3
H' D SW PULSE(25MHZ)
⑨ H' D SW
ENVELOPE DETECT
⑩ ENVE
CAPSTANFG C/D PULSE
⑪ C.FG C/D
POWER DETECT
⑫ PWR DET
OUTPUT EXP. STROBE
⑬ OUT EXPSTB
H' D AMP CONTROL
⑭ H' D AMP
SERVO IC CONTROL
⑮ SERVO CLK
⑯ SERVO DATA
CAPSTAN MOTOR CURRENT LIMITERCTL (AT STOP 'L')
⑰ C.M CTL
STILL/SLOWCAP. MOTORCTL
⑱ STEP/SLOW
STILL/SLOWDRUM MOTORCTL
⑲ DMC1
⑳ DMC2
INDEXDETECT INPUT (INDEX DETECT 'L')
㉑ INDEX
VPS DATA INPUT
㉒ VPS DATA IN
AUTO TRACKING ENVELOPEDETECT
㉓ ATR ENV
VPS CTL CLOCK
㉔ VPS CLK
SYNC DETECT INPUT
㉕ SYNC DET
AFT SIGNAL INPUT
㉖ AFT
INPUTEXP & NVRAM DATAINPUT
㉗ COM DATA IN
REMOCON PULSE
㉘ REMOCON
TUNER PWM PULSE
㉙ TUNER PWM
4.19MHZ
㉚ X1
㉛ X2
GND
㉜ Vss
VDD ㊸
VDD(5V)
(64) VDD
(63) S5
(62) S6
(61) S7
(60) S8
(59) S9
(58) S10
DIGITRON SEGMENT DRIVE OUTPUT
(57) VPRE
(56) VLOAD
DIGITRON DRIVE VOLTAGE
(55) OSD STB
OSD IC CONTROL
(54) NVRAM STB
NVRAM IC CONTROL
(53) CMF/R
CAP. MOTORROT. DIRCTL (AT FWD 'H')
(52) G13
(51) G12
(50) G11
㊾ G10
㊽ G9
㊼ G8
㊻ G7
㊺ G6
㊹ G5
㊸ G4
㊷ G3
㊶ G2
㊵ G1
DIGITRON GRIDE DRIVE OUTPUT
㊴ RESET
RESET
㊳ COM CLK
INPUTEXP, OUTPUTEXP, OSD NVRAM IC CTL CLOCK
㊲ COM DATA OUT
OSD, OUTPUTEXP, NVRAMICCTLDATA
㊱ ROTARY
VIDEO COLOR SW PULSE
㉟ IN EXP STB
INPUTEXP. STROBE
㉞ XT1
㉝ XT2
32.768KHZ

10-4. Servo 1 (IC201 : HD49748NT)

RED ——— DRUM SPEED CONTROL
- - - - DRUM PHASE CONTROL

BLUE ——— CAPSTAN SPEED CONTROL
- - - - CAPSTAN PHASE CONTROL

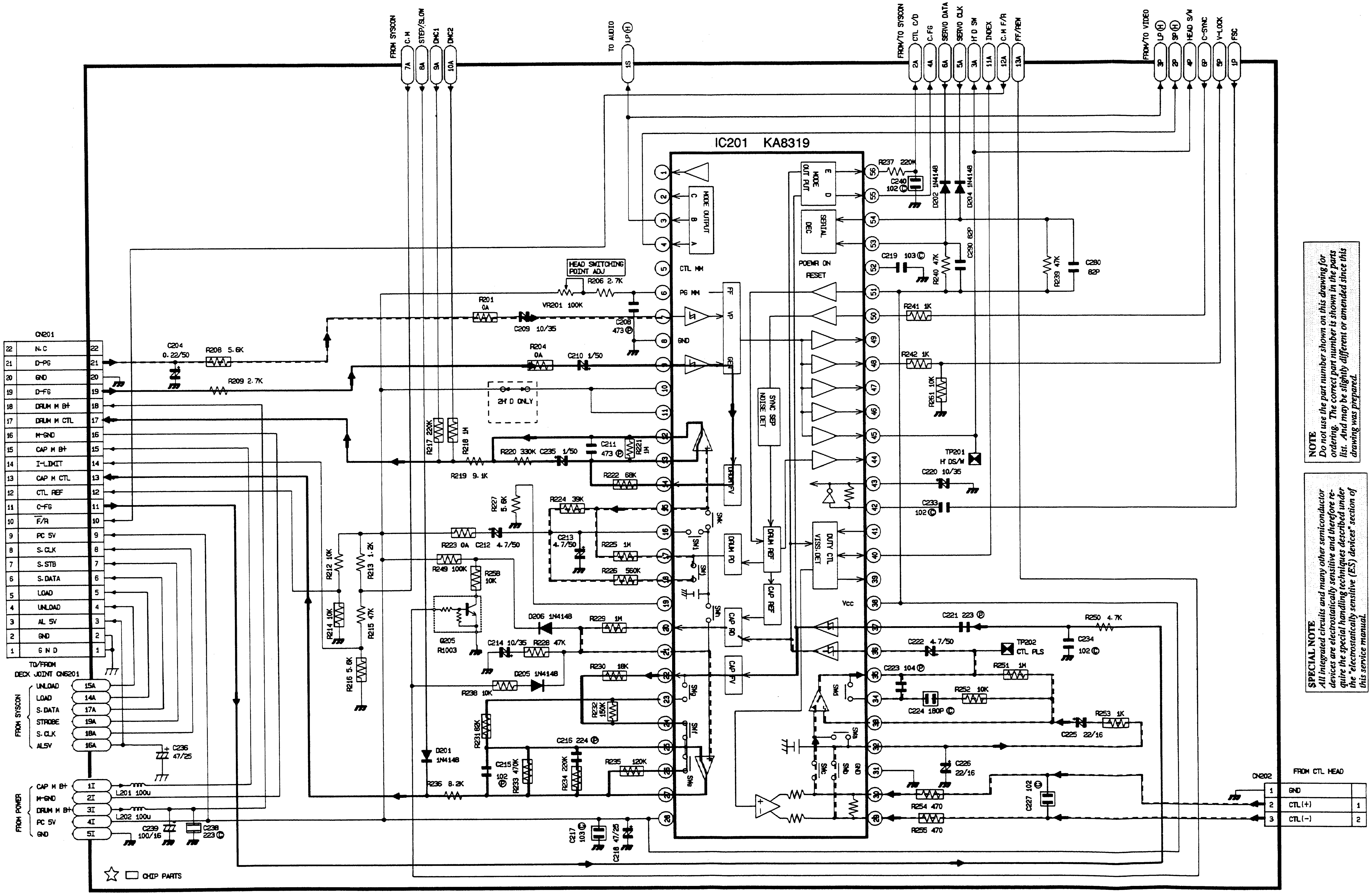

IC202 LM358S
IC201 HD49748NT
FROM SYSCON
C.M
STEP/SLOW
DMC1
DMC2
TO AUDIO
LP(H)
FROM/TO SYSCON
CTL C/D
C.FG
SERVO DATA
SERVO CLK
H'D SW
INDEX
C.M F/R
FF/REW
FROM/TO VIDEO
LP(H)
SP(H)
HEAD S/W
C-SYNC
V-LOCK
FSC
CN201
N.C
D-PG
GND
D-FG
DRUM M B+
DRUM M CTL
M-GND
CAP M B+
I-LIMIT
CAP M CTL
CTL REF
C-FG
F/R
PC5V
S.CLK
S.STB
S.DATA
LOAD
UNLOAD
AL5V
D-GND
TO/FROM DECK JOINT CN6201
FROM SYSCON
STROBE
FROM POWER
HEAD SWITCHING POINT ADJ
VR201 100K
2H' D ONLY
W219
MODE OUTPUT
SERIAL DEC
POEWR ON RESET
SYNC SEP NOISE DET
DRUM REF
CAP REF
DRUM PD
DUTY CTL VISS DET
CAP PD
CAP FV
Vcc
TP201 H'DS/W
TP202 CTL PLS
Q205 R1003
D201 1N4148
D202 1N4148
D204 1N4148
D205 1N4148
D206 1N4148
CN202
FROM CTL HEAD CN6206
CTL(+)
CTL(-)
:CHIP PARTS

NOTE
Do not use the part number shown on this drawing for ordering. The correct part number is shown in the parts list. And may be slightly different or amended since this drawing was prepared.

SPECIAL NOTE
All Integrated circuits and many other semiconductor devices are electrostatically sensitive and therefore require the special handling techniques described under the "electrostatically sensitive (ES) devices" section of this service manual.

10-5. Servo 2 (IC201 : KA8319)

RED ———— DRUM SPEED CONTROL
RED - - - - - DRUM PHASE CONTROL
BLUE ———— CAPSTAN SPEED CONTROL
BLUE - - - - - CAPSTAN PHASE CONTROL


IC201 KA8319
FROM SYSCON
7A C.M
8A STEP/SLOW
9A DMC1
10A DMC2
TO AUDIO
1S LP(H)
FROM/TO SYSCON
2A CTL C/D
4A C.FG
6A SERVO DATA
5A SERVO CLK
3A H D SW
11A INDEX
12A C.H F/R
13A FF/REW
FROM/TO VIDEO
3P LP(H)
2P SP(H)
4P HEAD S/W
6P C-SYNC
5P V-LOCK
1P FSC
CN201
22 N.C
21 D-PG
20 GND
19 D-FG
18 DRUM M B+
17 DRUM M CTL
16 M-GND
15 CAP M B+
14 I-LIMIT
13 CAP M CTL
12 CTL REF
11 C-FG
10 F/R
9 PC 5V
8 S.CLK
7 S.STB
6 S.DATA
5 LOAD
4 UNLOAD
3 AL 5V
2 GND
1 GND
TO/FROM DECK JOINT CN5201
FROM SYSCON
UNLOAD 15A
LOAD 14A
S.DATA 17A
STROBE 19A
S.CLK 18A
AL5V 16A
FROM POWER
CAP M B+ 1I
M-GND 2I
DRUM M B+ 3I
PC 5V 4I
GND 5I
L201 100u
L202 100u
C236 47/25
C239 100/16
C238 223
HEAD SWITCHING POINT ADJ
VR201 100K
R206 2.7K
R201 0A
C209 10/35
C208 473
C204 0.22/50
R208 5.6K
R209 2.7K
R204 0A
C210 1/50
2H D ONLY
R217 220K
R218 1M
R220 330K
C235 1/50
C211 473
R221 1M
R219 9.1K
R222 68K
R227 5.6K
R224 39K
C213 4.7/50
R223 0A
C212 4.7/50
R225 1M
R226 560K
R249 100K
R258 10K
R212 10K
R213 1.2K
R214 10K
R215 47K
R216 5.6K
Q205 R1003
D206 1N4148
R229 1M
C214 10/35
R228 47K
D205 1N4148
R238 10K
R230 18K
R232 150K
R231 82K
C216 224
C215 102
R233 470K
R234 220K
R235 120K
D201 1N4148
R236 8.2K
C217 103
C218 47/25
MODE OUTPUT
CTL MM
PG MM
GND
FF
VP
GEN
DRUM FV
DRUM PD
CAP PD
CAP FV
SYNC SEP NOISE DET
DRUM REF
CAP REF
DUTY CTL VISS DET
MODE OUT PUT
SERIAL DEC
POEWR ON RESET
Vcc
R237 220K
C240 102
D202 1N4148
D204 1N4148
C219 103
R240 47K
C230 82P
R239 47K
C280 82P
R241 1K
R242 1K
R261 10K
TP201 H DS/W
C220 10/35
C233 102
C221 223
R250 4.7K
C234 102
C222 4.7/50
TP202 CTL PLS
C223 104
R251 1M
C224 180P
R252 10K
R253 1K
C225 22/16
C226 22/16
R254 470
R255 470
C227 102
CN202
FROM CTL HEAD
1 GND
2 CTL(+) 1
3 CTL(−) 2
☆ □ CHIP PARTS

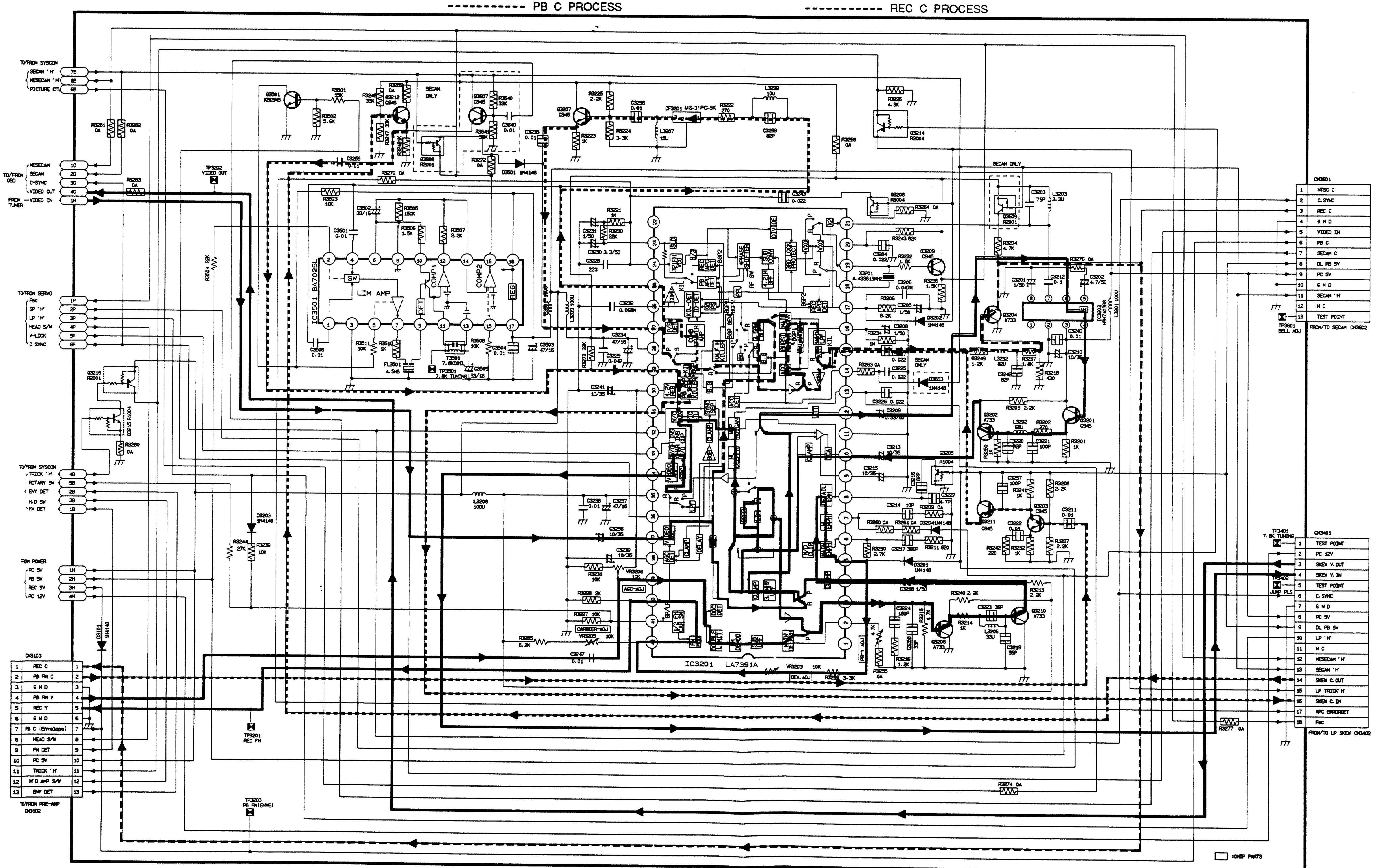
NOTE
Do not use the part number shown on this drawing for ordering. The correct part number is shown in the parts list. And may be slightly different or amended since this drawing was prepared.

SPECIAL NOTE
All integrated circuits and many other semiconductor devices are electrostatically sensitive and therefore require the special handling techniques described under the "electrostatically sensitive (ES) devices" section of this service manual.

10-6. Video (4H'd : VR4633)

RED ——— PB Y PROCESS
- - - - - PB C PROCESS

BLUE ——— REC Y PROCESS
- - - - - REC C PROCESS


TO/FROM SYSCON
SECAM 'H' 7B
MESECAM 'H' 8B
PICTURE CTL 6B
TO/FROM OSD
MESECAM 1O
SECAM 2O
C-SYNC 3O
VIDEO OUT 4O
FROM TUNER — VIDEO IN 1N
TO/FROM SERVO
Fsc 1P
SP 'H' 2P
LP 'H' 3P
HEAD S/W 4P
V-LOCK 5P
C SYNC 6P
TO/FROM SYSCON
TRICK 'H' 4B
ROTARY SW 5B
ENV DET 2B
H.D SW 3B
FM DET 1B
FROM POWER
PC 5V 1H
PB 5V 2H
REC 5V 3H
PC 12V 4H
CN3103
1 REC C
2 PB FM C
3 GND
4 PB FM Y
5 REC Y
6 GND
7 PB C (Envelope)
8 HEAD S/W
9 FM DET
10 PC 5V
11 TRICK 'H'
12 H'D AMP S/W
13 ENV DET
TO/FROM PRE-AMP CN3102
IC3501 BA7025L
IC3201 LA7391A
TP3202 VIDEO OUT
TP3201 REC FM
TP3203 PB FM(ENVE)
CN3601
1 NTSC C
2 C.SYNC
3 REC C
4 GND
5 VIDEO IN
6 PB C
7 SECAM C
8 DL PB 5V
9 PC 5V
10 GND
11 SECAM 'H'
12 NC
13 TEST POINT
TP3601 BELL ADJ
FROM/TO SECAM CN3602
TP3401 7.8K TUNING
CN3401
1 TEST POINT
2 PC 12V
3 SKEW V.OUT
4 SKEW V.IN
5 TEST POINT
6 C.SYNC
7 GND
8 PC 5V
9 DL PB 5V
10 LP 'H'
11 NC
12 MESECAM 'H'
13 SECAM 'H'
14 SKEW C.OUT
15 LP TRICK 'H'
16 SKEW C.IN
17 APC ERRORDET
18 Fsc
TP3402 JUMP PLS
FROM/TO LP SKEW CN3402
CHIP PARTS

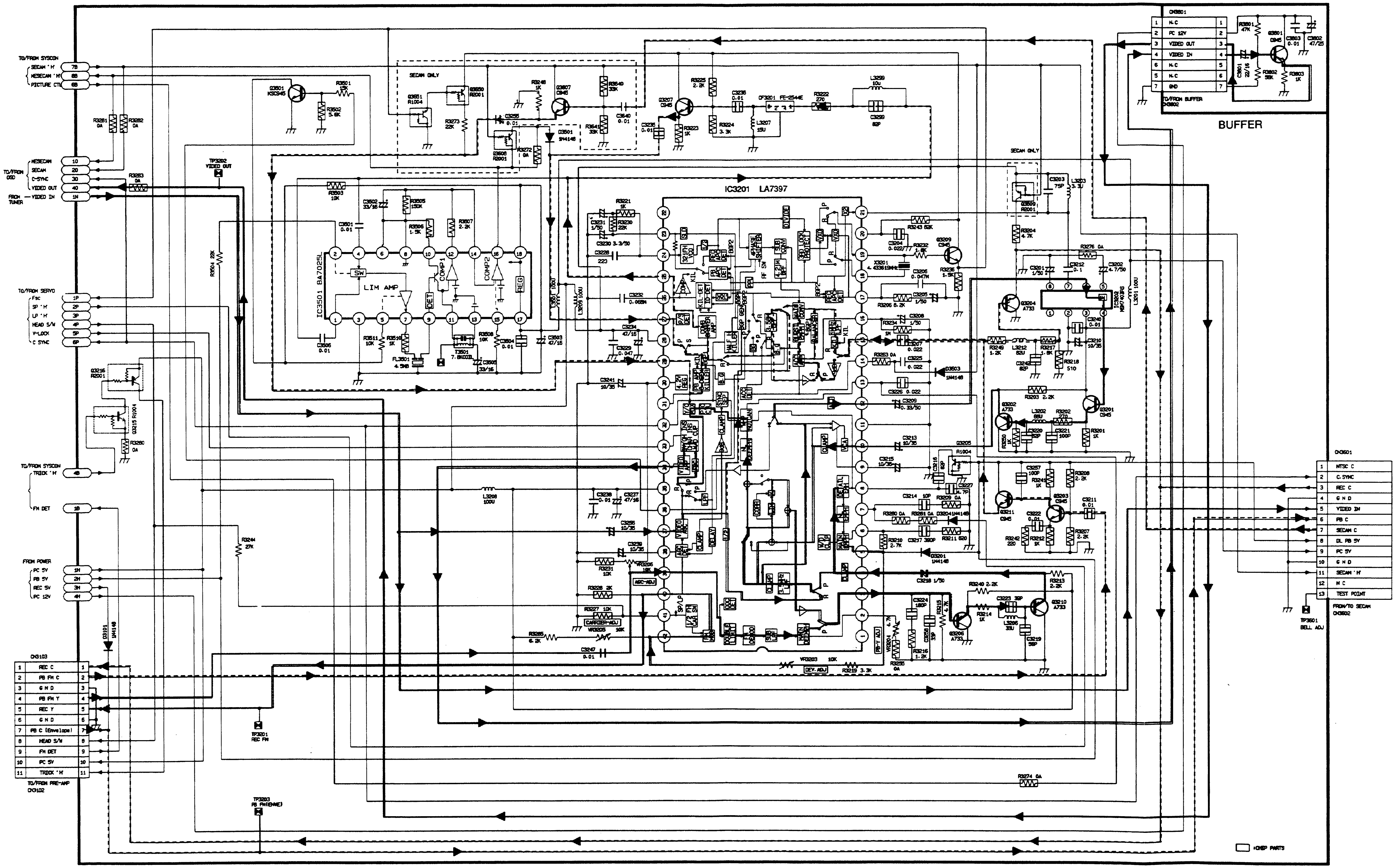
SPECIAL NOTE
All integrated circuits and many other semiconductor devices are electrostatically sensitive and therefore require the special handling techniques described under the "electrostatically sensitive (ES) devices" section of this service manual.

NOTE
Do not use the part number shown on this drawing for ordering. The correct part number is shown in the parts list. And may be slightly different or amended since this drawing was prepared.

10-7. Video/Buffer (2H'd : VR4632/VR4631)

RED ———— PB Y PROCESS
- - - - - - PB C PROCESS

BLUE ———— REC Y PROCESS
- - - - - - REC C PROCESS


TO/FROM SYSCON
SECAM 'H' 7B
MESECAM 'H' 8B
PICTURE CTL 6B
R3281 0A
R3282 0A
TO/FROM OSD
MESECAM 1O
SECAM 2O
C-SYNC 3O
VIDEO OUT 4O
FROM TUNER — VIDEO IN 1N
R3283 0A
TO/FROM SERVO
Fsc 1P
SP 'H' 2P
LP 'H' 3P
HEAD S/W 4P
V-LOCK 5P
C SYNC 6P
Q3216 R2001
Q3215 R1004
R3280 0A
TO/FROM SYSCON
TRICK 'H' 4B
FM DET 1B
FROM POWER
PC 5V 1H
PB 5V 2H
REC 5V 3H
PC 12V 4H
D3101 1N4148
CN3103
1 REC C 1
2 PB FM C 2
3 GND 3
4 PB FM Y 4
5 REC Y 5
6 GND 6
7 PB C (Envelope) 7
8 HEAD S/W 8
9 FM DET 9
10 PC 5V 10
11 TRICK 'H' 11
TO/FROM PRE-AMP CN3102
TP3201 REC FM
TP3202 VIDEO OUT
TP3203 PB FM(ENVE)
SECAM ONLY
Q3501 KSC945
IC3501 BA7025L
LIM AMP
COMP1
COMP2
DET
REG
SW
IC3201 LA7397
X3201 4.433619MHz
CF3201 FE-2544E
DEV. ADJ
CARRIER-ADJ
AGC-ADJ
CN3601
1 N.C 1
2 PC 12V 2
3 VIDEO OUT 3
4 VIDEO IN 4
6 N.C 5
5 N.C 6
7 GND 7
TO/FROM BUFFER CN3802
R3801 47K
Q3801 C945
C3803 0.01
C3802 47/25
C3801 22/16
R3802 56K
R3803 1K
BUFFER
CN3601
1 NTSC C
2 C.SYNC
3 REC C
4 GND
5 VIDEO IN
6 PB C
7 SECAM C
8 DL PB 5V
9 PC 5V
10 GND
11 SECAM 'H'
12 NC
13 TEST POINT
FROM/TO SECAM CN3602
TP3601 BELL ADJ
R3274 0A
:CHIP PARTS

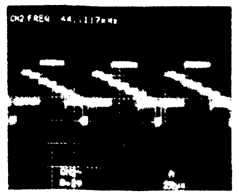
SPECIAL NOTE
All integrated circuits and many other semiconductor devices are electrostatically sensitive and therefore require the special handling techniques described under the "electrostatically sensitive (ES) devices" section of this service manual.

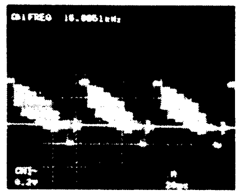
NOTE
Do not use the part number shown on this drawing for ordering. The correct part number is shown in the parts list. And may be slightly different or amended since this drawing was prepared.

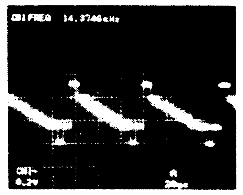
IC3201			
MODE / PIN NO	STOP	REC	PLAY
PIN 1	0.3	0.1	0.1
PIN 2	0	0	2.2
PIN 3	2.5	2.4	1.6
PIN 4	2.6	2.6	2.5
PIN 5	2.6	2.6	4.5
PIN 6	2.6	2.6	4.5
PIN 7	4.5	4.5	4.5
PIN 8	2.2	2.2	2.3
PIN 9	3.6	3.6	3.6
PIN 10	2.1	2.1	2.1
PIN 11	0	0	0
PIN 12	2.2	2.2	2.1
PIN 13	2.5	2.5	2.5
PIN 14	1.7	1.7	1.7
PIN 15	3.0	3.0	3.0
PIN 16	2.6	2.6	2.2
PIN 17	2.2	2.2	2.2
PIN 18	3.7	3.6	3.6
PIN 19	3.2	3.2	2.4
PIN 20	2.2	2.2	2.2
PIN 21	4.9	4.9	4.9
PIN 22	0	0	0
PIN 23	3.2	3.2	3.2
PIN 24	3.2	3.2	3.2
PIN 25	2.4	2.4	2.4
PIN 26	2.0	2.0	2.0
PIN 27	1.9	2.0	2.0
PIN 28	5.0	5.0	5.0
PIN 29	3.0	3.0	3.0
PIN 30	4.2	4.2	4.2
PIN 31	2.4	2.4	2.4
PIN 32	0.2	0.2	0.2
PIN 33	0	0	0
PIN 34	2.0	2.0	2.0
PIN 35	5.0	5.0	5.0
PIN 36	0.2	0.2	0.2
PIN 37	3.2	3.2	3.2
PIN 38	1.4	1.4	1.0
PIN 39	3.2	3.2	3.2
PIN 40	3.0	3.0	3.6
PIN 41	0.1	0.1	0.1
PIN 42	2.4	2.4	2.4

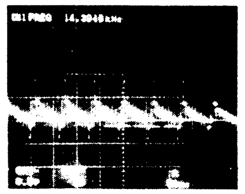
IC3501			
MODE / PIN NO	STOP	REC	PLAY
PIN 1	3.6	3.4	3.6
PIN 2	0	0	1.1
PIN 3	0	0	0
PIN 4	3.6	3.4	3.6
PIN 5	4.3	4.8	4.3
PIN 6	0	0	0
PIN 7	5.2	4.3	5.5
PIN 8	0	0	0
PIN 9	3.0	3.0	3.0
PIN 10	0	0	0
PIN 11	3.7	3.7	3.7
PIN 12	0	0	0
PIN 13	3.7	3.6	3.7
PIN 14	0	0	0
PIN 15	0	0	0
PIN 16	0	0	0
PIN 17	5.0	4.8	5.0
PIN 18	5.0	11.8	5.0

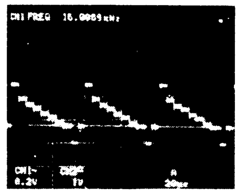
IC3202			
MODE / PIN NO	STOP	REC	PLAY
PIN 1	0	0	0
PIN 2	0	0	0
PIN 3	5.0	5.0	5.0
PIN 4	3.6	3.6	3.6
PIN 5	2.0	2.0	2.0
PIN 6	2.1	2.1	2.1
PIN 7	2.4	2.4	2.4
PIN 8	8.1	8.1	8.1

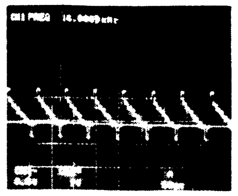

IC3201-3
0.5Vp-p
PB

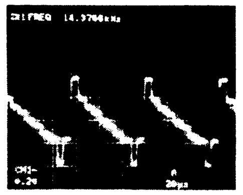

IC3201-3
0.55Vp-p
REC

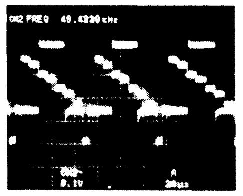

IC3201-4
0.5Vp-p
PB/REC

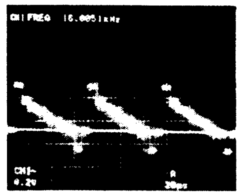

IC3201-5
1.2Vp-p
REC

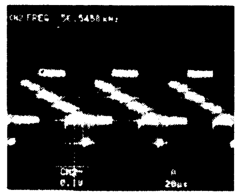

IC3201-6
0.5Vp-p
REC

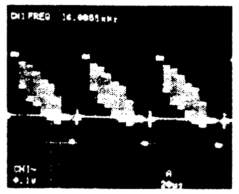

IC3201-7
1.0Vp-p
REC

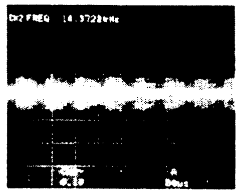

IC3201-8
0.6Vp-p
PB/REC

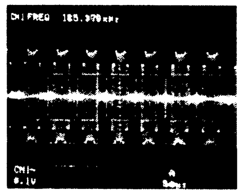

IC3201-10
0.5Vp-p
PB

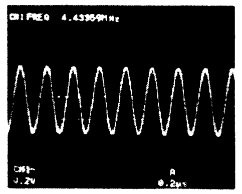

IC3201-10
0.6Vp-p
REC

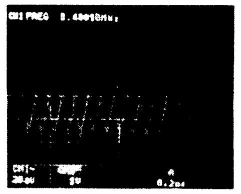

IC3201-12
0.4Vp-p
PB

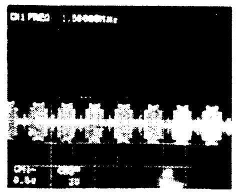

IC3201-12
0.38Vp-p
REC

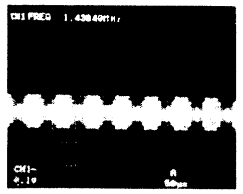

IC3201-15
0.15Vp-p
PB

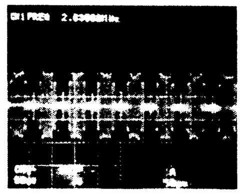

IC3201-15
0.4Vp-p
REC

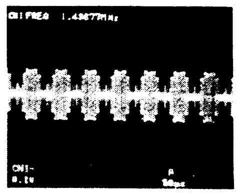

IC3201-18,19
0.55Vp-p
PB/REC

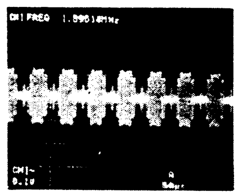

IC3201-21
40mVp-p
PB/REC

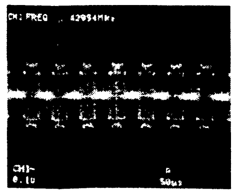

IC3201-25
0.8Vp-p
REC

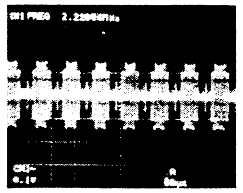

IC3201-27
0.15Vp-p
PB

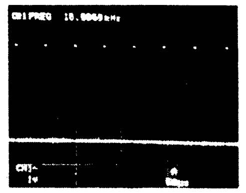

IC3201-27
150mVp-p
EE/REC

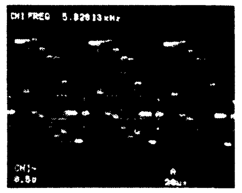

IC3201-29
0.2Vp-p
PB

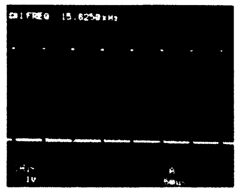

IC3201-29
0.24Vp-p
EE/REC

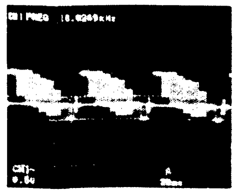

IC3201-31
0.3Vp-p
PB

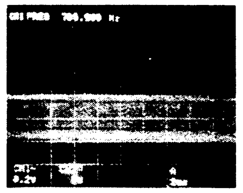

IC3201-31
0.3Vp-p
EE/REC

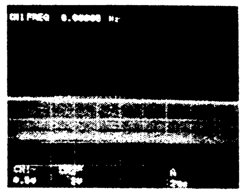

IC3201-32
4Vp-p
PB/REC

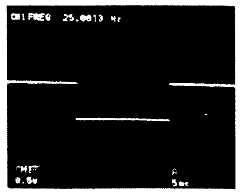

IC3201-34
2Vp-p
PB/REC


IC3201-36
4Vp-p
PB/REC

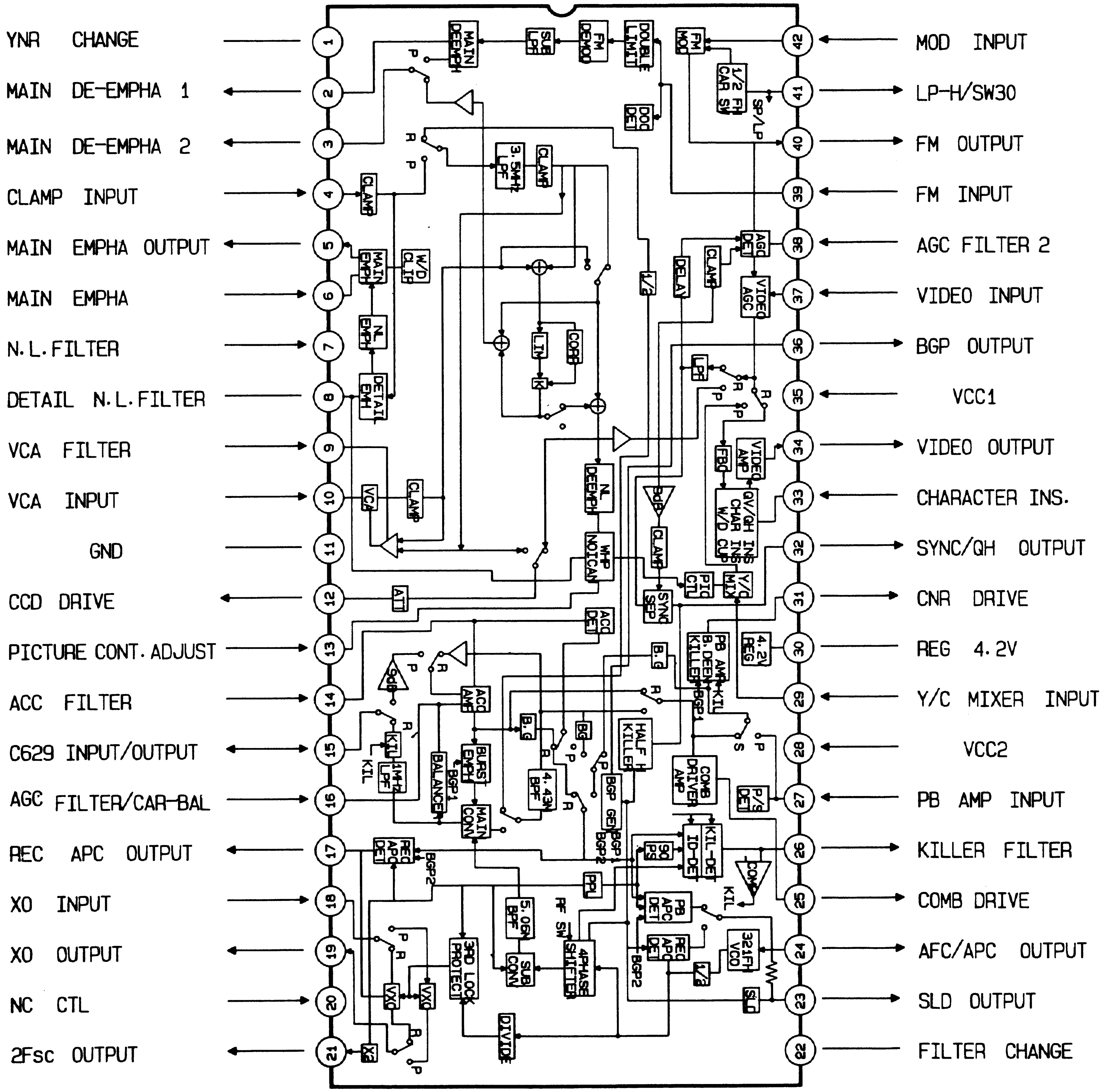

IC3201-37
1Vp-p
REC


IC3201-39
0.4Vp-p
PB

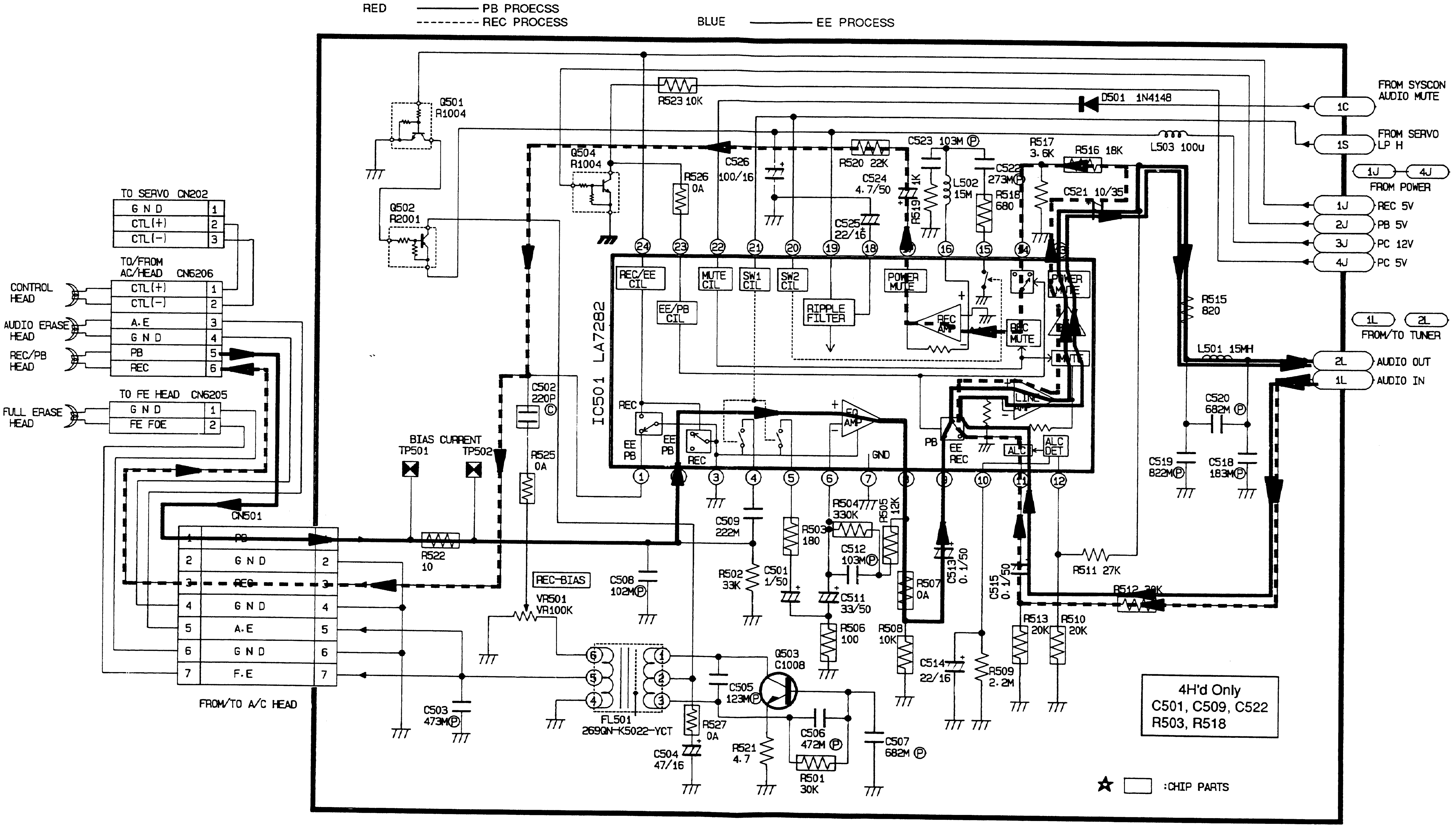

IC3201-40
1Vp-p
REC


IC3201-41
0.8Vp-p
PB/REC

IC3201 LA7397


1 YNR CHANGE
2 MAIN DE-EMPHA 1
3 MAIN DE-EMPHA 2
4 CLAMP INPUT
5 MAIN EMPHA OUTPUT
6 MAIN EMPHA
7 N.L.FILTER
8 DETAIL N.L.FILTER
9 VCA FILTER
10 VCA INPUT
11 GND
12 CCD DRIVE
13 PICTURE CONT.ADJUST
14 ACC FILTER
15 C629 INPUT/OUTPUT
16 AGC FILTER/CAR-BAL
17 REC APC OUTPUT
18 XO INPUT
19 XO OUTPUT
20 NC CTL
21 2Fsc OUTPUT
22 FILTER CHANGE
23 SLD OUTPUT
24 AFC/APC OUTPUT
25 COMB DRIVE
26 KILLER FILTER
27 PB AMP INPUT
28 VCC2
29 Y/C MIXER INPUT
30 REG 4.2V
31 CNR DRIVE
32 SYNC/QH OUTPUT
33 CHARACTER INS.
34 VIDEO OUTPUT
35 VCC1
36 BGP OUTPUT
37 VIDEO INPUT
38 AGC FILTER 2
39 FM INPUT
40 FM OUTPUT
41 LP-H/SW30
42 MOD INPUT
MAIN DEEMPH
SUB LPF
FM DEMOD
DOUBLE LIMIT
FM MOD
1/2 FH CAR SW
DOC DET
SP/LP
3.5MHz LPF
CLAMP
AGC DET
VIDEO AGC
DELAY
W/D CLIP
MAIN EMPH
NL EMPH
DETAIL EMH
LIM
CORR
K
LPF
VIDEO AMP
FBC
QV/QH INS CHAR INS W/D CLIP
VCA
NL DEEMPH
WHP NOICAN
6dB
SYNC SEP
PIC CTL
Y/C MIX
ATT
ACC DET
4.2V REG
PB AMP B.DEM KILLER
KIL
B.G
ACC AMP
BG
HALF H KILLER
COMB DRIVER AMP
P/S DET
BURST EMPH
BGP1
BALANCER
4.43M BPF
1M LPF
MAIN CONV
BGP GEN
BGP2
90 PS
KIL-DET ID-DET
COMP
REC APC DET
FPL
PB APC DET
5.06M BPF
RF SW
REC APC DET
32fH VCO
1/2
SLD
3RD LOCK PROTECT
SUB CONV
4PHASE SHIFTER
VXO
XO
DIVIDE
P
R
S

10-8. Audio


RED
PB PROECSS
REC PROCESS
BLUE
EE PROCESS
TO SERVO CN202
GND 1
CTL(+) 2
CTL(-) 3
TO/FROM AC/HEAD CN6206
CONTROL HEAD
CTL(+) 1
CTL(-) 2
AUDIO ERASE HEAD
A.E 3
GND 4
REC/PB HEAD
PB 5
REC 6
TO FE HEAD CN6205
FULL ERASE HEAD
GND 1
FE FOE 2
CN501
PB
GND
REC
GND
A.E
GND
F.E
FROM/TO A/C HEAD
Q501 R1004
Q502 R2001
Q504 R1004
R523 10K
R526 0A
C526 100/16
R520 22K
C523 103M Ⓟ
C524 4.7/50
C525 22/16
R519 1K
L502 15M
C522 273MⓅ
R518 680
R517 3.6K
R516 18K
C521 10/35
D501 1N4148
L503 100u
IC501 LA7282
REC/EE CTL
MUTE CTL
SW1 CTL
SW2 CTL
EE/PB CTL
RIPPLE FILTER
POWER MUTE
REC AMP
REC MUTE
MUTE
LINE AMP
EQ AMP
ALC
ALC DET
GND
REC
EE PB
R515 820
L501 15MH
C520 682M Ⓟ
C519 822MⓅ
C518 183MⓅ
C502 220P Ⓒ
BIAS CURRENT
TP501
TP502
R525 0A
R522 10
REC-BIAS
VR501 VR100K
C503 473MⓅ
C508 102MⓅ
C509 222M
R502 33K
C501 1/50
R503 180
R504 330K
R505 12K
C512 103MⓅ
C511 33/50
R507 0A
C513 0.1/50
R506 100
R508 10K
C514 22/16
R509 2.2M
C515 0.1/50
R511 27K
R512 39K
R513 20K
R510 20K
FL501 269QN-K5022-YCT
C505 123MⓅ
Q503 C1008
R527 0A
C504 47/16
R521 4.7
C506 472M Ⓟ
R501 30K
C507 682M Ⓟ
FROM SYSCON AUDIO MUTE
1C
FROM SERVO LP H
1S
1J 4J FROM POWER
1J REC 5V
2J PB 5V
3J PC 12V
4J PC 5V
1L 2L FROM/TO TUNER
2L AUDIO OUT
1L AUDIO IN

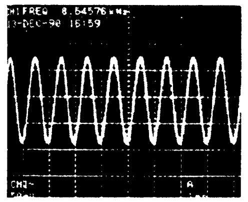
4H'd Only
C501, C509, C522
R503, R518

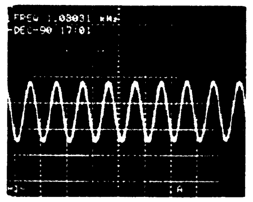
☆ ☐ :CHIP PARTS

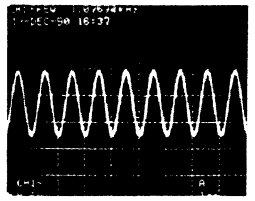
SPECIAL NOTE
All integrated circuits and many other semiconductor devices are electrostatically sensitive and therefore require the special handling techniques described under the "electrostatically sensitive (ES) devices" section of this service manual.

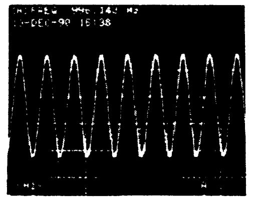
NOTE
Do not use the part number shown on this drawing for ordering. The correct part number is shown in the parts list. And may be slightly different or amended since this drawing was prepared.

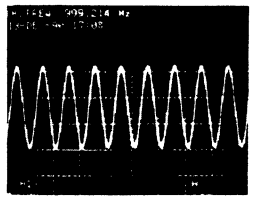
IC501 MODE / PIN NO	STOP	REC	PLAY
PIN 1	0	0	0
PIN 2	0	0	0
PIN 3	0	0	0
PIN 4	0	0	0
PIN 5	0	0	0
PIN 6	0.6	0.6	0.6
PIN 7	0	0	0
PIN 8	3.3	3.3	3.3
PIN 9	3.7	3.7	3.7
PIN 10	0.6	0.6	0
PIN 11	3.7	3.7	3.7
PIN 12	0	0	0
PIN 13	3.7	3.7	3.7
PIN 14	0	0	0
PIN 15	0	0	0
PIN 16	1.5	1.5	1.5
PIN 17	4.2	4.2	4.2
PIN 18	9.1	9.1	9.1
PIN 19	12.0	12.0	12.0
PIN 20	0	0	0
PIN 21	0	0	0
PIN 22	0	0	0
PIN 23	4.8	4.8	0
PIN 24	0	5.1	0

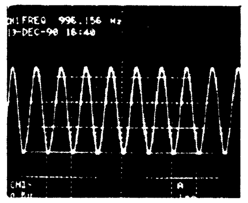

IC501-8
0.2Vp-p
PLAY

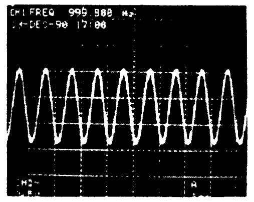

IC501-10
0.12Vp-p
PLAY

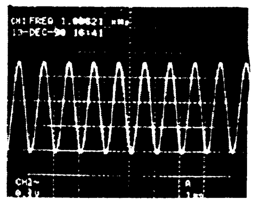

IC501-11
0.25Vp-p
STOP

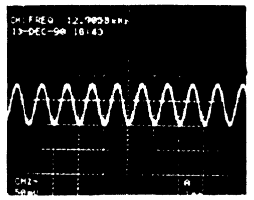

IC501-12
0.8Vp-p
STOP

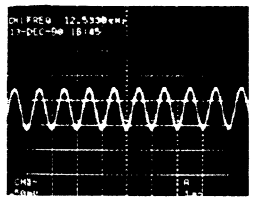

IC501-12
0.7Vp-p
PLAY

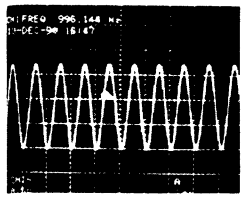

IC501-13
1.7Vp-p
STOP

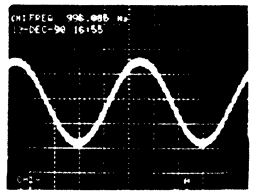

IC501-13
1.5Vp-p
PLAY

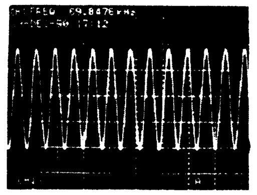

IC501-14
0.4Vp-p
STOP


IC501-15
0.1Vp-p
STOP

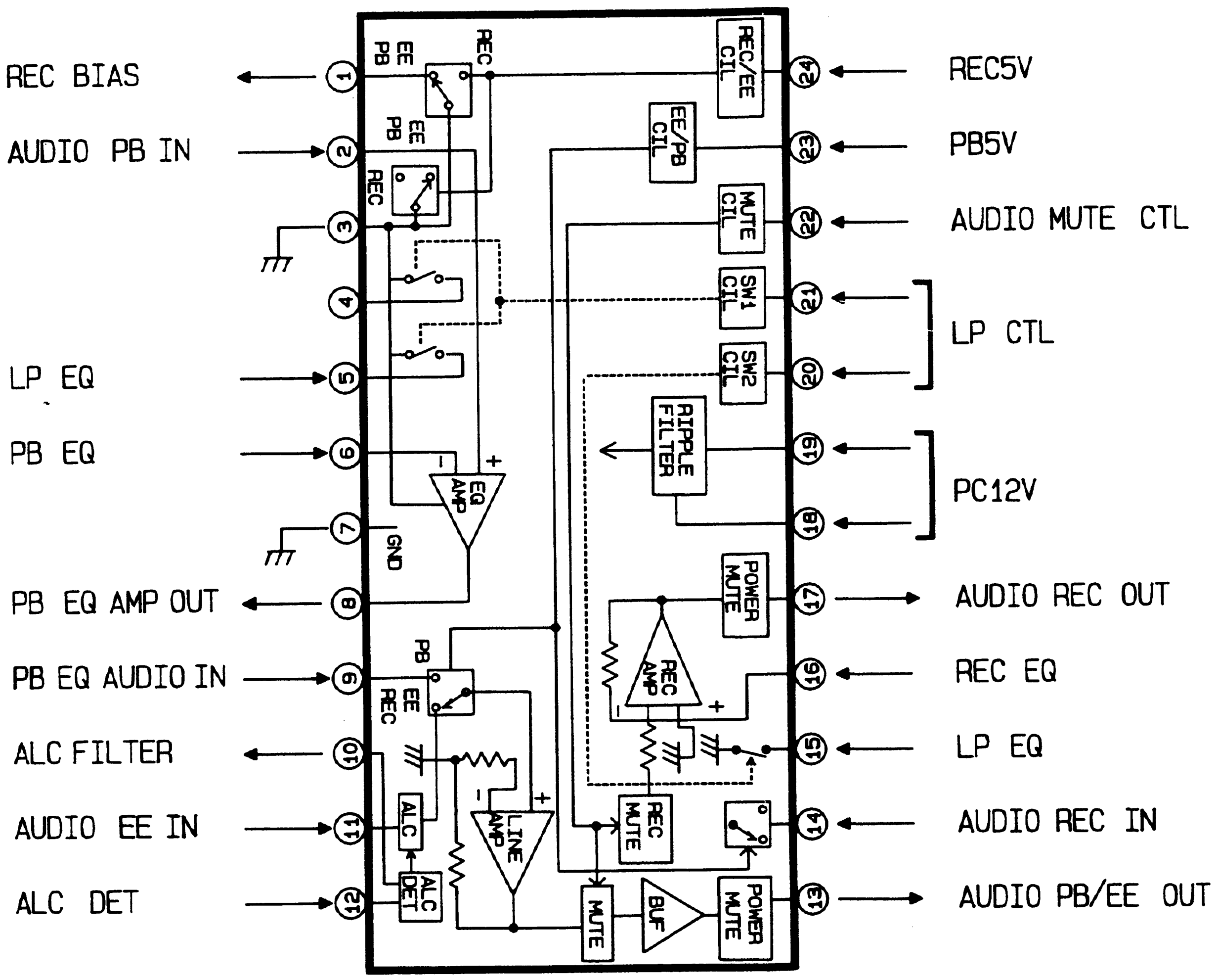

IC501-16
0.1Vp-p
STOP


IC501-17
1.7Vp-p
STOP


IC501-17
1.8Vp-p
REC


CN501-3
40Vp-p
REC

IC501 LA7282


REC BIAS
AUDIO PB IN
LP EQ
PB EQ
PB EQ AMP OUT
PB EQ AUDIO IN
ALC FILTER
AUDIO EE IN
ALC DET
REC5V
PB5V
AUDIO MUTE CTL
LP CTL
PC12V
AUDIO REC OUT
REC EQ
LP EQ
AUDIO REC IN
AUDIO PB/EE OUT
EE
PB
REC
REC/EE CTL
EE/PB CTL
MUTE CTL
SW1 CTL
SW2 CTL
RIPPLE FILTER
EQ AMP
GND
POWER MUTE
REC AMP
LINE AMP
ALC
ALC DET
REC MUTE
MUTE
BUF
POWER MUTE
1
2
3
4
5
6
7
8
9
10
11
12
13
14
15
16
17
18
19
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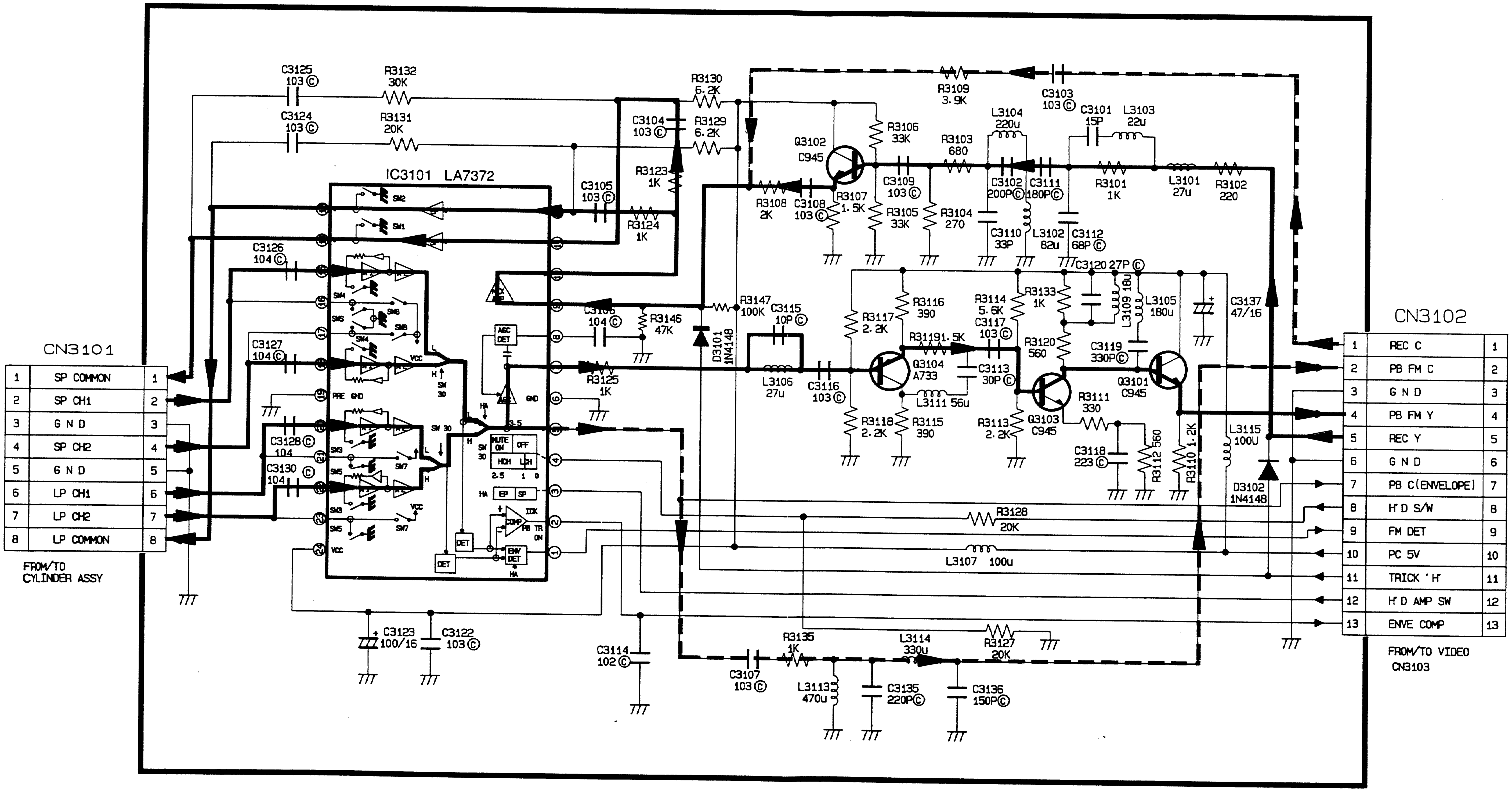
21
22
23
24

10-9. Pre-Amp (4H'd : VR4633)


IC3101 LA7372
CN3101
1 SP COMMON
2 SP CH1
3 GND
4 SP CH2
5 GND
6 LP CH1
7 LP CH2
8 LP COMMON
FROM/TO CYLINDER ASSY
CN3102
1 REC C
2 PB FM C
3 GND
4 PB FM Y
5 REC Y
6 GND
7 PB C(ENVELOPE)
8 H'D S/W
9 FM DET
10 PC 5V
11 TRICK 'H'
12 H'D AMP SW
13 ENVE COMP
FROM/TO VIDEO CN3103
C3125 103©
R3132 30K
C3124 103©
R3131 20K
R3130 6.2K
C3104 103©
R3129 6.2K
R3123 1K
C3105 103©
R3124 1K
C3126 104©
C3127 104©
C3128© 104
C3130 © 104
C3106 104©
R3146 47K
D3101 1N4148
R3147 100K
C3115 10P©
R3125 1K
L3106 27u
C3116 103©
Q3102 C945
R3106 33K
R3108 2K
C3108 103©
R3107 1.5K
C3109 103©
R3105 33K
R3104 270
R3103 680
R3109 3.9K
C3103 103©
L3104 220u
C3102 200P©
C3111 180P©
C3110 33P
L3102 82u
C3112 68P©
C3101 15P
L3103 22u
R3101 1K
L3101 27u
R3102 220
C3120 27P©
R3133 1K
L3109 18u
L3105 180u
C3137 47/16
R3116 390
R3117 2.2K
R3114 5.6K
C3117 103©
R3119 1.5K
Q3104 A733
C3113 30P©
L3111 56u
R3120 560
C3119 330P©
Q3101 C945
R3118 2.2K
R3115 390
R3113 2.2K
Q3103 C945
R3111 330
C3118 223©
R3112 560
R3110 1.2K
L3115 100U
D3102 1N4148
R3128 20K
L3107 100u
C3123 100/16
C3122 103©
C3114 102©
C3107 103©
R3135 1K
L3113 470u
C3135 220P©
L3114 330u
C3136 150P©
R3127 20K
SW1
SW2
SW3
SW4
SW5
SW6
SW7
SW8
AGC DET
MUTE ON
OFF
HCH
LCH
EP
SP
DET
ENV DET
COMP
PB TR ON
PRE GND
VCC
GND

RED ——— PB Y PROCESS
- - - - - PB C PROCESS

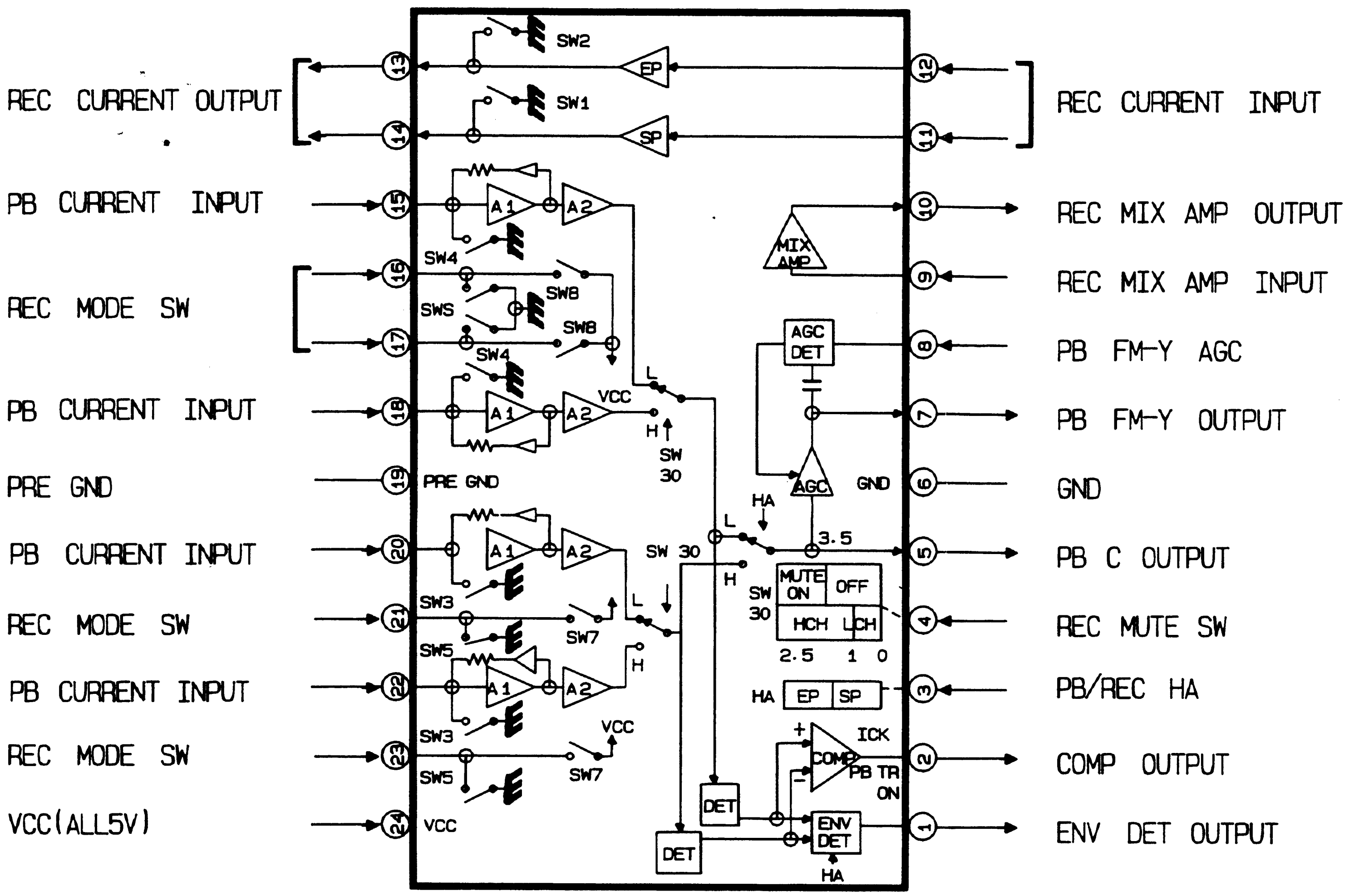
BLUE ——— REC Y PROCESS
- - - - - REC C PROCESS

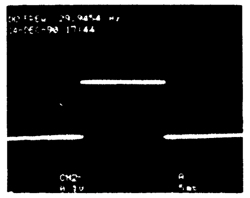
SPECIAL NOTE
All integrated circuits and many other semiconductor devices are electrostatically sensitive and therefore require the special handling techniques described under the "electrostatically sensitive (ES) devices" section of this service manual.

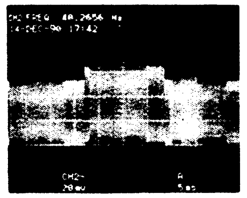
NOTE
Do not use the part number shown on this drawing for ordering. The correct part number is shown in the parts list. And may be slightly different or amended since this drawing was prepared.

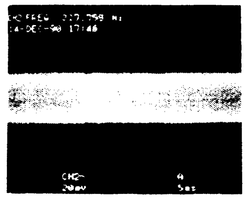
IC3101			
PIN NO / MODE	STOP	REC	PLAY
PIN 1	1.5	0	4.0
PIN 2	0	0	0
PIN 3	0	0	0
PIN 4	1.3	1.3	1.3
PIN 5	1.6	4.4	1.6
PIN 6	0	0	0
PIN 7	2.6	4.2	0
PIN 8	0.7	0	1.1
PIN 9	2.1	1.8	2.1
PIN 10	0.1	2.0	0.1
PIN 11	1.6	1.9	1.6
PIN 12	1.6	0	1.6
PIN 13	0	0	0
PIN 14	0	4.4	0
PIN 15	0.7	0	0.7
PIN 16	0	4.4	0
PIN 17	0	4.4	0
PIN 18	0.7	0.1	0.7
PIN 19	0	0	0
PIN 20	0.1	0	0.1
PIN 21	0	0	0
PIN 22	0.1	0.1	0.1
PIN 23	0	0	0
PIN 24	5.2	5.2	5.2

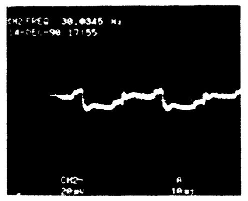
IC3101 LA7372

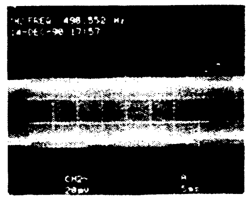

REC CURRENT OUTPUT
PB CURRENT INPUT
REC MODE SW
PB CURRENT INPUT
PRE GND
PB CURRENT INPUT
REC MODE SW
PB CURRENT INPUT
REC MODE SW
VCC(ALL5V)
REC CURRENT INPUT
REC MIX AMP OUTPUT
REC MIX AMP INPUT
PB FM-Y AGC
PB FM-Y OUTPUT
GND
PB C OUTPUT
REC MUTE SW
PB/REC HA
COMP OUTPUT
ENV DET OUTPUT
SW2
SW1
EP
SP
A1
A2
SW4
SW8
SW5
VCC
H
L
SW 30
PRE GND
SW3
SW7
MIX AMP
AGC DET
AGC
GND
3.5
HA
MUTE ON
OFF
HCH
LCH
2.5
1
0
EP
SP
ICK
COMP
PB TR ON
ENV DET
DET
VCC

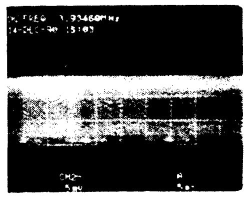

IC3101-4
3Vp-p
PB

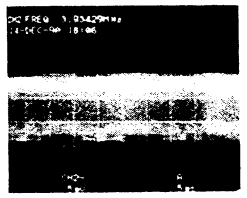

IC3101-5
0.6Vp-p
PB

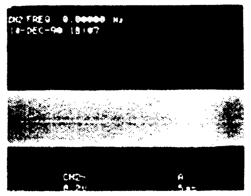

IC3101-7
0.4Vp-p
PB

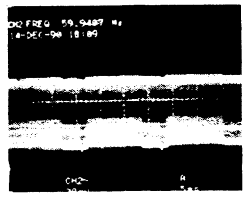

IC3101-8
0.2Vp-p
PB

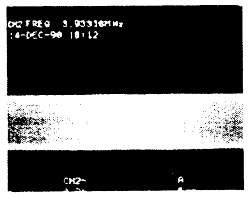

IC3101-10
0.6Vp-p
REC


IC3101-11
0.15Vp-p
REC


IC3101-12
0.15Vp-p
REC


IC3101-14
4Vp-p
REC

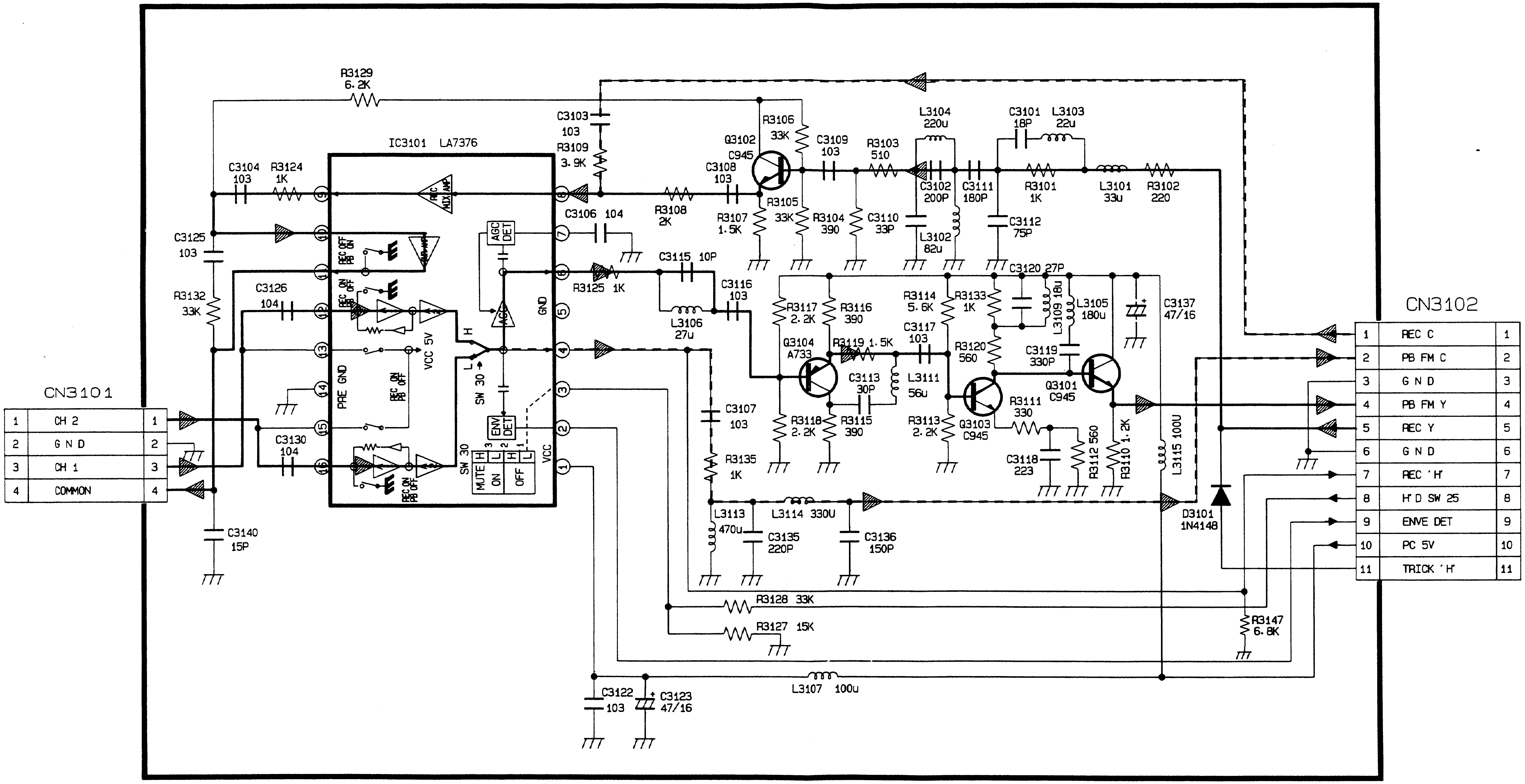

IC3101-15
0.6Vp-p
REC


CN3101-1
4Vp-p
REC

10-10. Pre-Amp (2H'd : VR4632/VR4631)

RED ——— PB Y PROCESS
------- PB C PROCESS

BLUE ——— REC Y PROCESS
------- REC C PROCESS

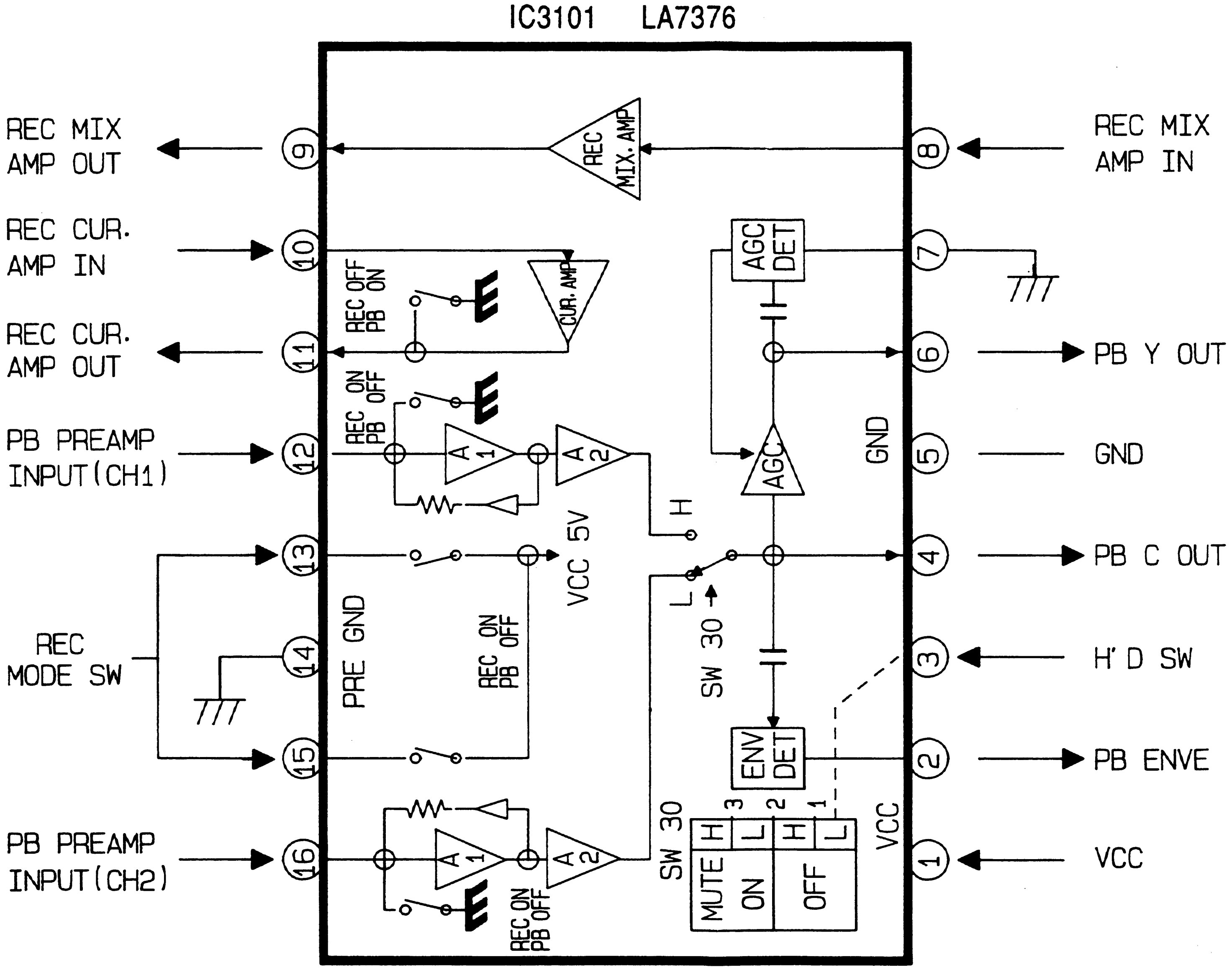

R3129 6.2K
C3103 103
R3109 3.9K
IC3101 LA7376
C3104 103
R3124 1K
C3125 103
R3132 33K
C3126 104
C3130 104
C3140 15P
REC MIX AMP
AGC DET
AGC
ENV DET
PRE GND
GND
VCC
VCC 5V
SW 30
MUTE H L
ON L H
OFF L
REC OFF PB ON
REC ON PB OFF
H
L
Q3102 C945
R3106 33K
C3108 103
R3105 33K
R3107 1.5K
R3108 2K
C3106 104
C3109 103
R3103 510
R3104 390
C3110 33P
L3104 220u
C3102 200P
C3111 180P
L3102 82u
C3101 18P
L3103 22u
R3101 1K
C3112 75P
L3101 33u
R3102 220
C3115 10P
R3125 1K
C3116 103
L3106 27u
R3117 2.2K
R3116 390
R3114 5.6K
R3133 1K
C3120 27P
L3109 18u
L3105 180u
C3137 47/16
Q3104 A733
R3119 1.5K
C3117 103
R3120 560
C3119 330P
Q3101 C945
C3113 30P
L3111 56u
R3118 2.2K
R3115 390
R3113 2.2K
Q3103 C945
R3111 330
C3118 223
R3112 560
R3110 1.2K
L3115 100U
C3107 103
R3135 1K
L3113 470u
L3114 330U
C3135 220P
C3136 150P
D3101 1N4148
R3128 33K
R3127 15K
R3147 6.8K
C3122 103
C3123 47/16
L3107 100u
CN3101
1 CH 2 1
2 GND 2
3 CH 1 3
4 COMMON 4
CN3102
1 REC C 1
2 PB FM C 2
3 GND 3
4 PB FM Y 4
5 REC Y 5
6 GND 6
7 REC 'H' 7
8 H'D SW 25 8
9 ENVE DET 9
10 PC 5V 10
11 TRICK 'H' 11

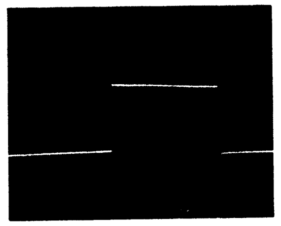
SPECIAL NOTE
All integrated circuits and many other semiconductor devices are electrostatically sensitive and therefore require the special handling techniques described under the "electrostatically sensitive (ES) devices" section of this service manual.

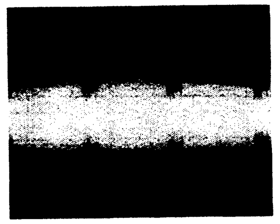
NOTE
Do not use the part number shown on this drawing for ordering. The correct part number is shown in the parts list. And may be slightly different or amended since this drawing was prepared.

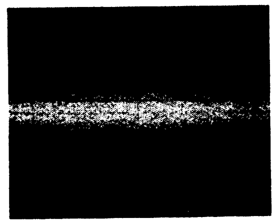
IC3101

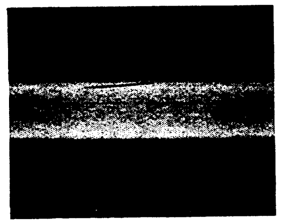
PIN NO \ MODE	STOP	REC	PLAY
PIN 1	5.0	5.0	5.0
PIN 2	0	0	1.5
PIN 3	0	⎍ 1.5 0	⎍ 1.5 0
PIN 4	2.0	4.5	2.0
PIN 5	0	0	0
PIN 6	2.5	4.0	2.5
PIN 7	0.8	0	0.8
PIN 8	2.0	1.8	2.0
PIN 9	0	1.8	0
PIN 10	1.5	2.0	1.5
PIN 11	0	4.5	0
PIN 12	0.7	0	0.7
PIN 13	0	4.0	0
PIN 14	0	0	0
PIN 15	0	4.0	0
PIN 16	0.7	0	0.7

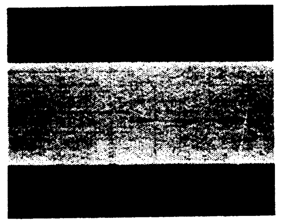

IC3101 LA7376
REC MIX AMP OUT
REC CUR. AMP IN
REC CUR. AMP OUT
PB PREAMP INPUT(CH1)
REC MODE SW
PB PREAMP INPUT(CH2)
REC MIX AMP IN
PB Y OUT
GND
PB C OUT
H' D SW
PB ENVE
VCC
REC MIX.AMP
CUR.AMP
REC OFF PB ON
REC ON PB OFF
A 1
A 2
AGC
AGC DET
ENV DET
PRE GND
VCC 5V
H
L
SW 30
MUTE
ON
OFF
GND
VCC
1 2 3 4 5 6 7 8 9 10 11 12 13 14 15 16

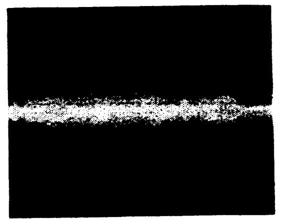

IC3101-3
5Vp-p
PB


IC3101-8
80mVp-p
REC

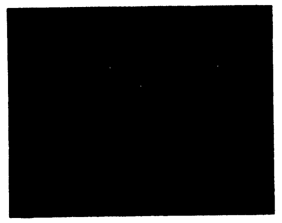

IC3101-10
0.1Vp-p
REC


IC3101-11
0.4Vp-p
REC

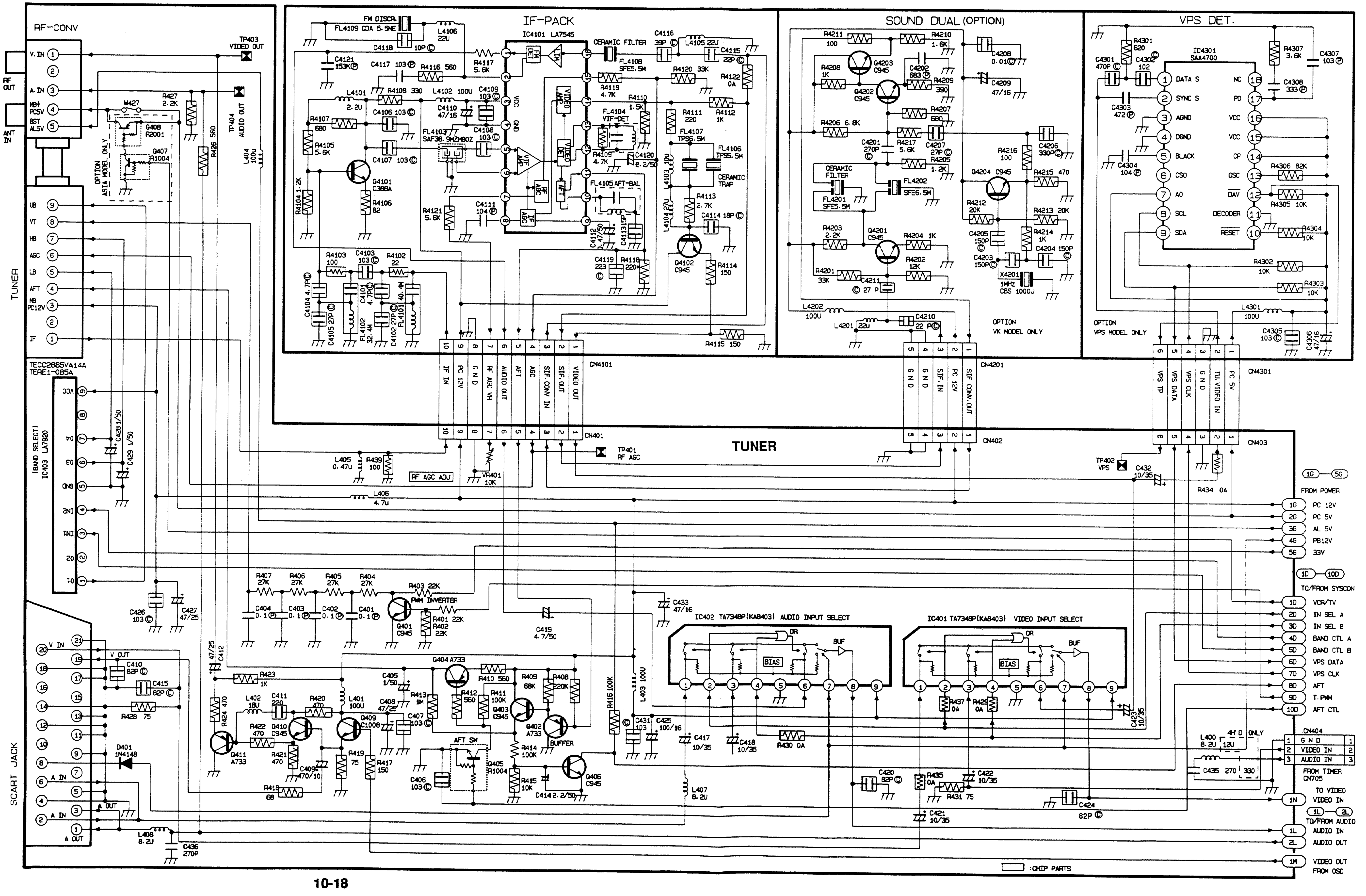

CN3101-4
0.4Vp-p
REC


CN3102-2
1Vp-p
PB

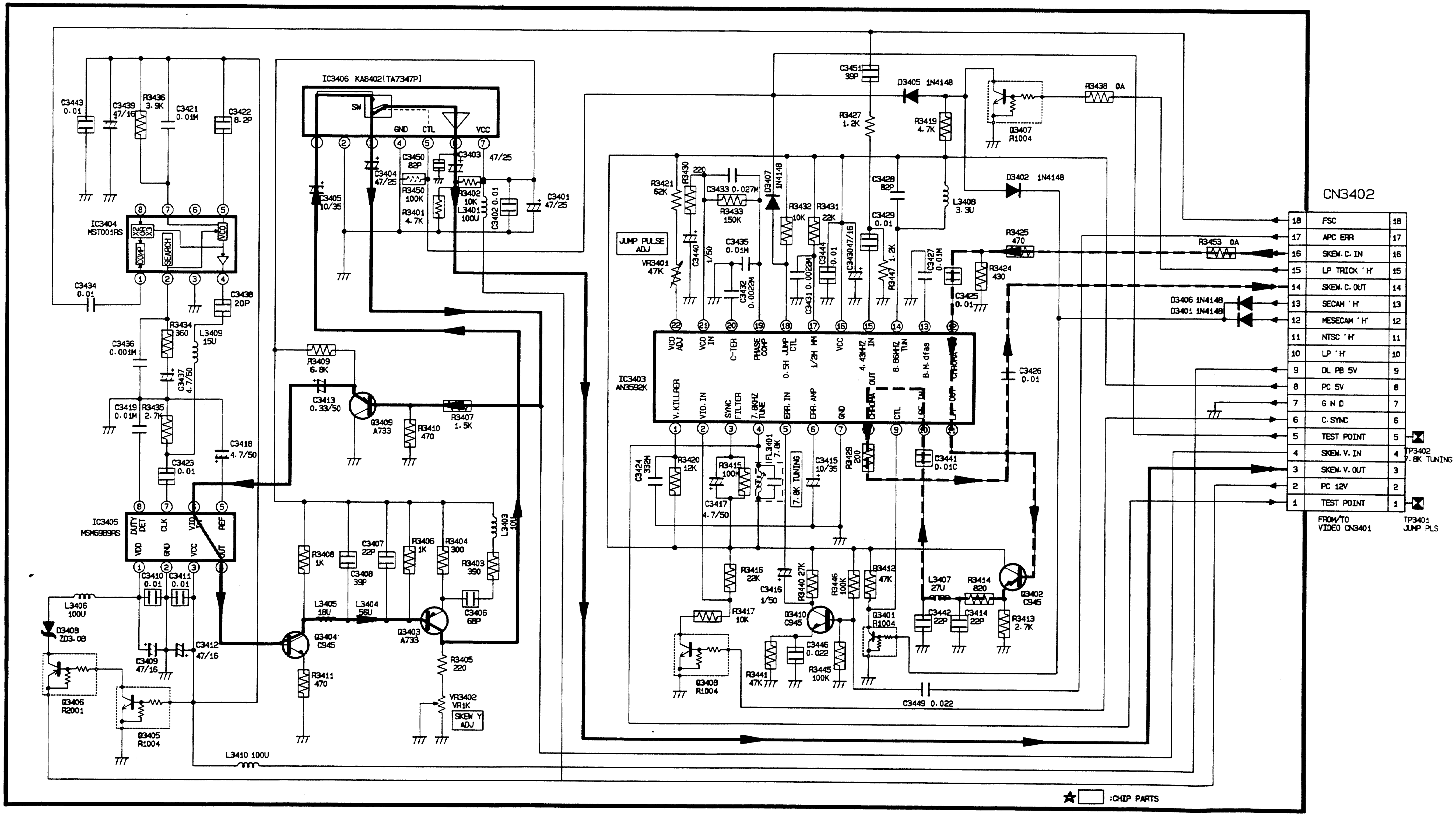
CN3102-4
0.4Vp-p
PB


CN3102-9
PB

10-11. Tuner/IF-PACK/VPS


RF-CONV
V.IN
A.IN
RF OUT
ANT IN
TP403 VIDEO OUT
TP404 AUDIO OUT
OPTION ASIA MODEL ONLY
TUNER
TECC2885VA14A
TERE1-085A
IC403 LA7920 [BAND SELECT]
IF-PACK
IC4101 LA7545
CERAMIC FILTER
FL4109 CDA 5.5ME
FL4108 SFE5.5M
FL4103 SAF38.9MZH80Z
FL4104 VIF-DET
FL4105 AFT-BAL
FL4107 TPS6.5M
FL4106 TPS5.5M
CERAMIC TRAP
Q4101 C388A
Q4102 C945
SOUND DUAL (OPTION)
Q4201 C945
Q4202 C945
Q4203 C945
Q4204 C945
FL4201 SFE5.5M
FL4202 SFE6.5M
X4201 1MHz CBS 1000J
OPTION VK MODEL ONLY
VPS DET.
IC4301 SAA4700
DATA S
SYNC S
AGND
DGND
BLACK
CSO
A0
SCL
SDA
NC
PD
VCC
CP
OSC
DAV
DECODER
RESET
OPTION VPS MODEL ONLY
CN4101
IF IN
PC 12V
GND
RF AGC VR
AUDIO OUT
AFT
AGC
SIF CONV IN
SIF OUT
VIDEO OUT
CN4201
GND
SIF IN
PC 12V
SIF CONV. OUT
CN4301
VPS TP
VPS DATA
VPS CLK
GND
TU VIDEO IN
PC 5V
CN401
CN402
CN403
TUNER
TP401 RF AGC
RF AGC ADJ
TP402 VPS
FROM POWER
PC 12V
PC 5V
AL 5V
PB12V
33V
TO/FROM SYSCON
VCR/TV
IN SEL A
IN SEL B
BAND CTL A
BAND CTL B
VPS DATA
VPS CLK
AFT
T.PWM
AFT CTL
IC402 TA7348P(KA8403) AUDIO INPUT SELECT
IC401 TA7348P(KA8403) VIDEO INPUT SELECT
OR
BUF
BIAS
PWM INVERTER
Q401 C945
Q404 A733
Q402 A733
BUFFER
Q403 C945
Q406 C945
Q411 A733
Q410 C945
Q409 C1008
AFT SW
Q405 R1004
D401 1N4148
CN404
GND
VIDEO IN
AUDIO IN
FROM TIMER CN705
TO VIDEO
VIDEO IN
TO/FROM AUDIO
AUDIO IN
AUDIO OUT
VIDEO OUT FROM OSD
SCART JACK
V IN
V OUT
A IN
A OUT
:CHIP PARTS

10-12. LP SKEW (Only for VR4633)


IC3406 KA8402(TA7347P)
SW
GND
CTL
VCC
IC3404 MST001RS
COMP
SEARCH
VCO
IC3405 MSM6989RS
DUTY DET
CLK
VID IN
REF
VDD
GND
VCC
OUT
IC3403 AN3592K
VCO ADJ
VCO IN
C-TER
PHASE COMP
0.5H JUMP CTL
1/2H HH
VCC
4.43MHZ IN
8.86MHZ TUN
B.M.dfas
CHROMA
V.KILLER
VID. IN
SYNC FILTER
7.8KHZ TUNE
ERR. IN
ERR. AMP
GND
CHROMA OUT
CTL
LPF OUT
C3443 0.01
C3439 47/16
R3436 3.9K
C3421 0.01M
C3422 8.2P
C3434 0.01
C3438 20P
R3434 360
L3409 15U
C3436 0.001M
C3437 4.7/50
C3419 0.01M
R3435 2.7K
C3418 4.7/50
C3423 0.01
C3410 0.01
C3411 0.01
L3406 100U
D3408 ZD3.0B
Q3406 R2001
C3409 47/16
C3412 47/16
Q3405 R1004
L3410 100U
C3405 10/35
C3404 47/25
C3450 82P
R3450 100K
R3401 4.7K
C3403 47/25
R3402 10K
L3401 100U
C3402 0.01
C3401 47/25
R3409 6.8K
C3413 0.33/50
Q3409 A733
R3410 470
R3407 1.5K
R3408 1K
C3408 39P
C3407 22P
R3406 1K
R3404 300
R3403 390
L3403 10U
L3405 18U
L3404 56U
C3406 68P
Q3404 C945
Q3403 A733
R3411 470
R3405 220
VR3402 VR1K
SKEW Y ADJ
C3451 39P
D3405 1N4148
R3427 1.2K
R3419 4.7K
Q3407 R1004
R3438 0A
D3402 1N4148
R3421 82K
R3430 220
C3433 0.027M
R3433 150K
D3407 1N4148
R3432 10K
R3431 22K
C3428 82P
C3429 0.01
L3408 3.3U
JUMP PULSE ADJ
VR3401 47K
C3440 1/50
C3435 0.01M
C3432 0.0022M
C3431 0.0022M
C3444 0.01
C3430 47/16
R3447 1.2K
C3427 0.01M
R3425 470
R3424 430
C3425 0.01
C3426 0.01
C3424 332M
R3420 12K
R3415 100K
C3417 4.7/50
FL3401 7.8K
7.8K TUNING
C3415 10/35
R3428 200
C3441 0.01C
R3416 22K
C3416 1/50
R3440 27K
R3446 100K
R3412 47K
L3407 27U
R3414 820
Q3402 C945
R3417 10K
Q3410 C945
Q3408 R1004
R3441 47K
C3446 0.022
R3445 100K
Q3401 R1004
C3442 22P
C3414 22P
R3413 2.7K
C3449 0.022
R3453 0A
D3406 1N4148
D3401 1N4148
CN3402
18 FSC 18
17 APC ERR 17
16 SKEW. C. IN 16
15 LP TRICK 'H' 15
14 SKEW. C. OUT 14
13 SECAM 'H' 13
12 MESECAM 'H' 12
11 NTSC 'H' 11
10 LP 'H' 10
9 DL PB 5V 9
8 PC 5V 8
7 G N D 7
6 C. SYNC 6
5 TEST POINT 5
4 SKEW. V. IN 4
3 SKEW. V. OUT 3
2 PC 12V 2
1 TEST POINT 1
TP3402 7.8K TUNING
FROM/TO VIDEO CN3401
TP3401 JUMP PLS
★☐ :CHIP PARTS

RED ——— PB (Y+C) PROCESS
--------- PB C PROCESS

SPECIAL NOTE
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NOTE
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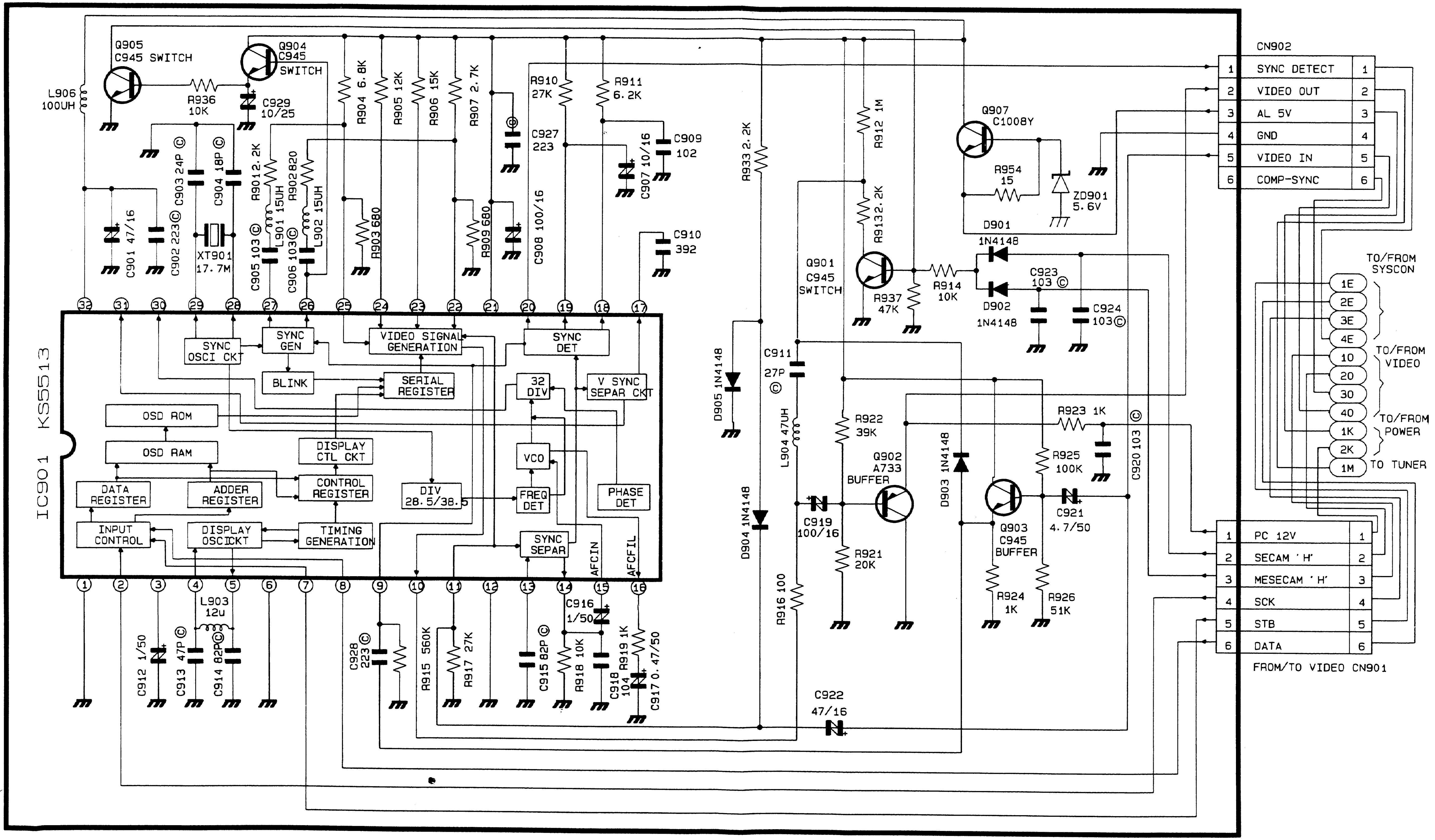
10-13. O.S.D


IC901 KS5513
Q905 C945 SWITCH
Q904 C945 SWITCH
L906 100UH
R936 10K
C929 10/25
C903 24P ©
C904 18P ©
C901 47/16
C902 223©
XT901 17.7M
R901 2.2K
R902 820
L901 15UH
L902 15UH
C905 103 ©
C906 103©
R904 6.8K
R905 12K
R906 15K
R907 2.7K
R903 680
R909 680
C908 100/16
R910 27K
C927 223
R911 6.2K
C907 10/16
C909 102
C910 392
R933 2.2K
R912 1M
R913 2.2K
Q901 C945 SWITCH
R937 47K
R914 10K
Q907 C1008Y
R954 15
ZD901 5.6V
D901 1N4148
D902 1N4148
C923 103 ©
C924 103©
D905 1N4148
C911 27P ©
L904 47UH
R922 39K
Q902 A733 BUFFER
D903 1N4148
R923 1K
R925 100K
C920 103 ©
C919 100/16
C921 4.7/50
Q903 C945 BUFFER
D904 1N4148
R921 20K
R916 100
R924 1K
R926 51K
C922 47/16
SYNC OSCI CKT
SYNC GEN
VIDEO SIGNAL GENERATION
SYNC DET
BLINK
SERIAL REGISTER
32 DIV
V SYNC SEPAR CKT
OSD ROM
OSD RAM
DISPLAY CTL CKT
VCO
DATA REGISTER
ADDER REGISTER
CONTROL REGISTER
DIV 28.5/38.5
FREQ DET
PHASE DET
INPUT CONTROL
DISPLAY OSCICKT
TIMING GENERATION
SYNC SEPAR
AFCIN
AFCFIL
L903 12u
C912 1/50
C913 47P ©
C914 82P©
C928 223©
R915 560K
R917 27K
C915 82P ©
C916 1/50
R918 10K
C918 104
R919 1K
C917 0.47/50
CN902
1 SYNC DETECT 1
2 VIDEO OUT 2
3 AL 5V 3
4 GND 4
5 VIDEO IN 5
6 COMP-SYNC 6
TO/FROM SYSCON
1E
2E
3E
4E
10
20
30
40
TO/FROM VIDEO
TO/FROM POWER
1K
2K
1M
TO TUNER
1 PC 12V 1
2 SECAM 'H' 2
3 MESECAM 'H' 3
4 SCK 4
5 STB 5
6 DATA 6
FROM/TO VIDEO CN901

SPECIAL NOTE
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NOTE
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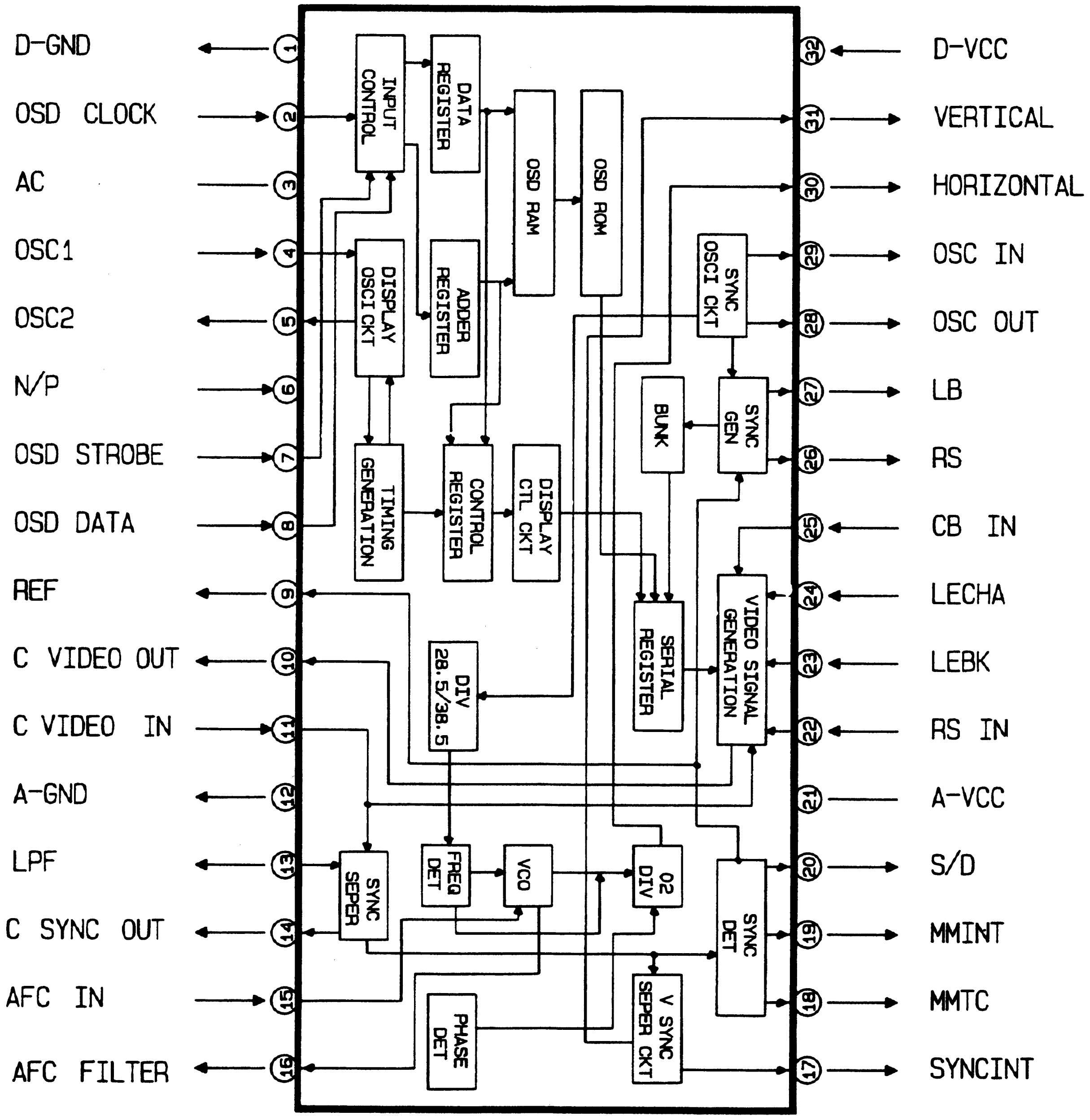
IC901			
MODE / PIN NO	STOP	REC	PLAY
PIN 1	0	0	0
PIN 2	0.4	0.4	0.4
PIN 3	4.9	4.9	4.9
PIN 4	2.0	2.0	2.0
PIN 5	2.0	2.0	2.0
PIN 6	0	0	0
PIN 7	3.2	3.3	3.3
PIN 8	0.5	0.4	0.4
PIN 9	1.5	2.5	2.4
PIN 10	0.9	1.0	0.9
PIN 11	0.2	1.0	0.9
PIN 12	0	0	0
PIN 13	1.6	2.6	2.6
PIN 14	4.0	0.5	0.4
PIN 15	0.5	0.1	0.1
PIN 16	2.3	2.3	2.3
PIN 17	4.9	0.3	0.3
PIN 18	0.6	0.7	0.7
PIN 19	4.9	1.8	1.8
PIN 20	0	4.2	4.2
PIN 21	4.9	4.9	4.9
PIN 22	1.1	1.1	1.1
PIN 23	0.8	0.8	0.8
PIN 24	2.2	2.2	2.2
PIN 25	[illegible]	0.6	0.6
PIN 26	2.0	0	0
PIN 27	[illegible]	0.6	0
PIN 28	2.4	2.4	2.4
PIN 29	2.4	2.4	2.4
PIN 30	4.6	4.6	4.6
PIN 31	0	4.9	4.9
PIN 32	4.9	5.0	5.0

IC901 KS5513


D-GND
OSD CLOCK
AC
OSC1
OSC2
N/P
OSD STROBE
OSD DATA
REF
C VIDEO OUT
C VIDEO IN
A-GND
LPF
C SYNC OUT
AFC IN
AFC FILTER
D-VCC
VERTICAL
HORIZONTAL
OSC IN
OSC OUT
LB
RS
CB IN
LECHA
LEBK
RS IN
A-VCC
S/D
MMINT
MMTC
SYNCINT
INPUT CONTROL
DATA REGISTER
OSD RAM
OSD ROM
DISPLAY OSCI CKT
ADDER REGISTER
SYNC OSCI CKT
BLNK
SYNC GEN
TIMING GENERATION
CONTROL REGISTER
DISPLAY CTL CKT
SERIAL REGISTER
VIDEO SIGNAL GENERATION
DIV 28.5/36.5
SYNC SEPER
FREQ DET
VCO
02 DIV
SYNC DET
PHASE DET
V SYNC SEPER CKT
1
2
3
4
5
6
7
8
9
10
11
12
13
14
15
16
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18
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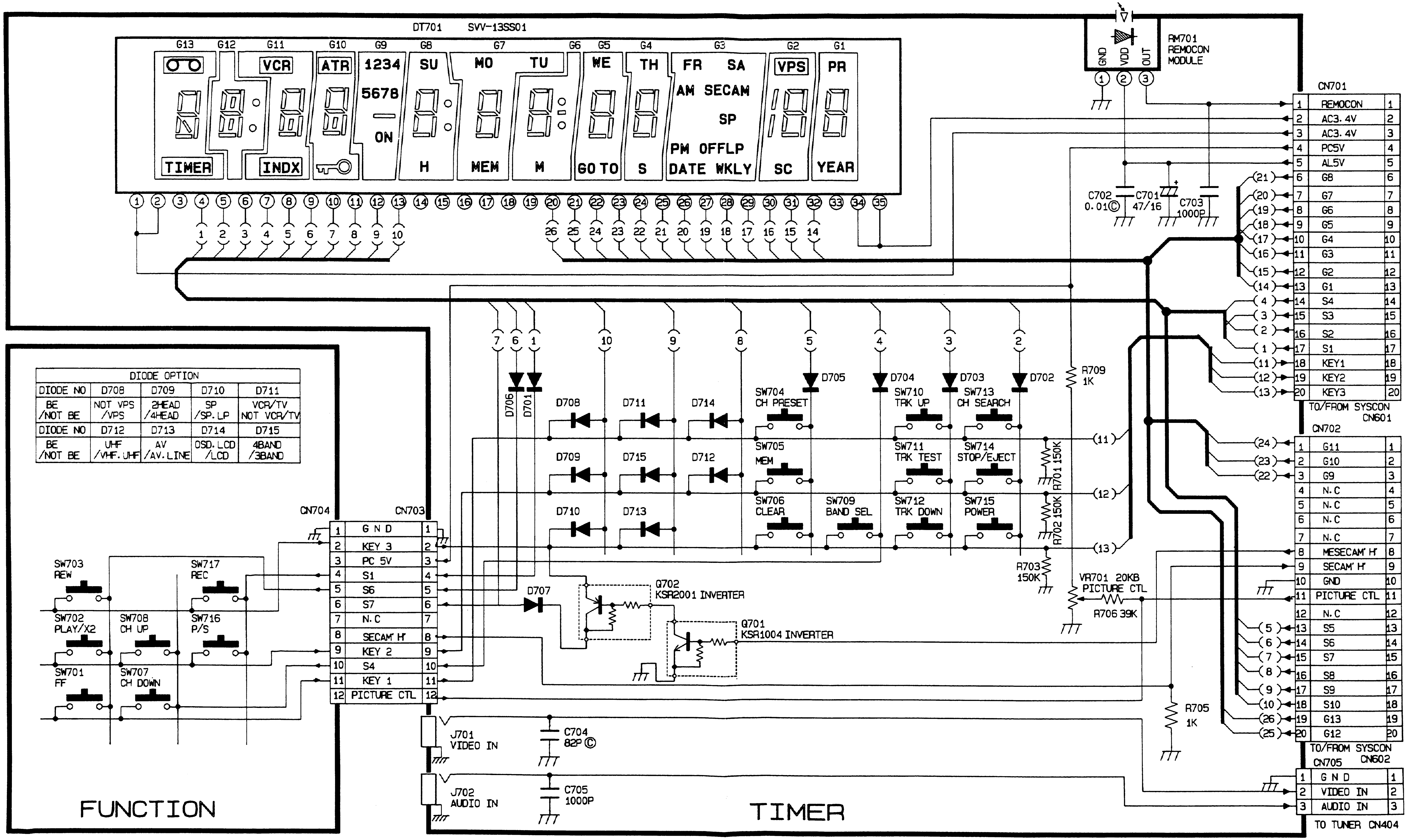
32

10-14. Function/Timer


DT701 SVV-13SS01
G13 G12 G11 G10 G9 G8 G7 G6 G5 G4 G3 G2 G1
VCR ATR 1234 5678 ON SU MO TU WE TH FR SA AM SECAM SP PM OFFLP VPS PR
TIMER INDX H MEM M GO TO S DATE WKLY SC YEAR
RM701 REMOCON MODULE
GND VDD OUT
CN701
1 REMOCON
2 AC3.4V
3 AC3.4V
4 PC5V
5 AL5V
6 G8
7 G7
8 G6
9 G5
10 G4
11 G3
12 G2
13 G1
14 S4
15 S3
16 S2
17 S1
18 KEY1
19 KEY2
20 KEY3
TO/FROM SYSCON CN601
C702 0.01Ⓒ
C701 47/16
C703 1000P
D705 D704 D703 D702
D706 D701
D708 D711 D714
D709 D715 D712
D710 D713
SW704 CH PRESET
SW710 TRK UP
SW713 CH SEARCH
SW705 MEM
SW711 TRK TEST
SW714 STOP/EJECT
SW706 CLEAR
SW709 BAND SEL
SW712 TRK DOWN
SW715 POWER
R709 1K
R701 150K
R702 150K
R703 150K
VR701 20KB PICTURE CTL
R706 39K
Q702 KSR2001 INVERTER
Q701 KSR1004 INVERTER
D707
R705 1K
CN702
1 G11
2 G10
3 G9
4 N.C
5 N.C
6 N.C
7 N.C
8 MESECAM' H'
9 SECAM' H'
10 GND
11 PICTURE CTL
12 N.C
13 S5
14 S6
15 S7
16 S8
17 S9
18 S10
19 G13
20 G12
TO/FROM SYSCON CN602
CN704 CN703
1 GND
2 KEY 3
3 PC 5V
4 S1
5 S6
6 S7
7 N.C
8 SECAM' H'
9 KEY 2
10 S4
11 KEY 1
12 PICTURE CTL
SW703 REW
SW717 REC
SW702 PLAY/X2
SW708 CH UP
SW716 P/S
SW701 FF
SW707 CH DOWN
J701 VIDEO IN
J702 AUDIO IN
C704 82P Ⓒ
C705 1000P
CN705
1 GND
2 VIDEO IN
3 AUDIO IN
TO TUNER CN404
FUNCTION
TIMER

DIODE OPTION				
DIODE NO	D708	D709	D710	D711
BE /NOT BE	NOT VPS /VPS	2HEAD /4HEAD	SP /SP.LP	VCR/TV NOT VCR/TV
DIODE NO	D712	D713	D714	D715
BE /NOT BE	UHF /VHF.UHF	AV /AV.LINE	OSD.LCD /LCD	4BAND /3BAND

SPECIAL NOTE
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NOTE
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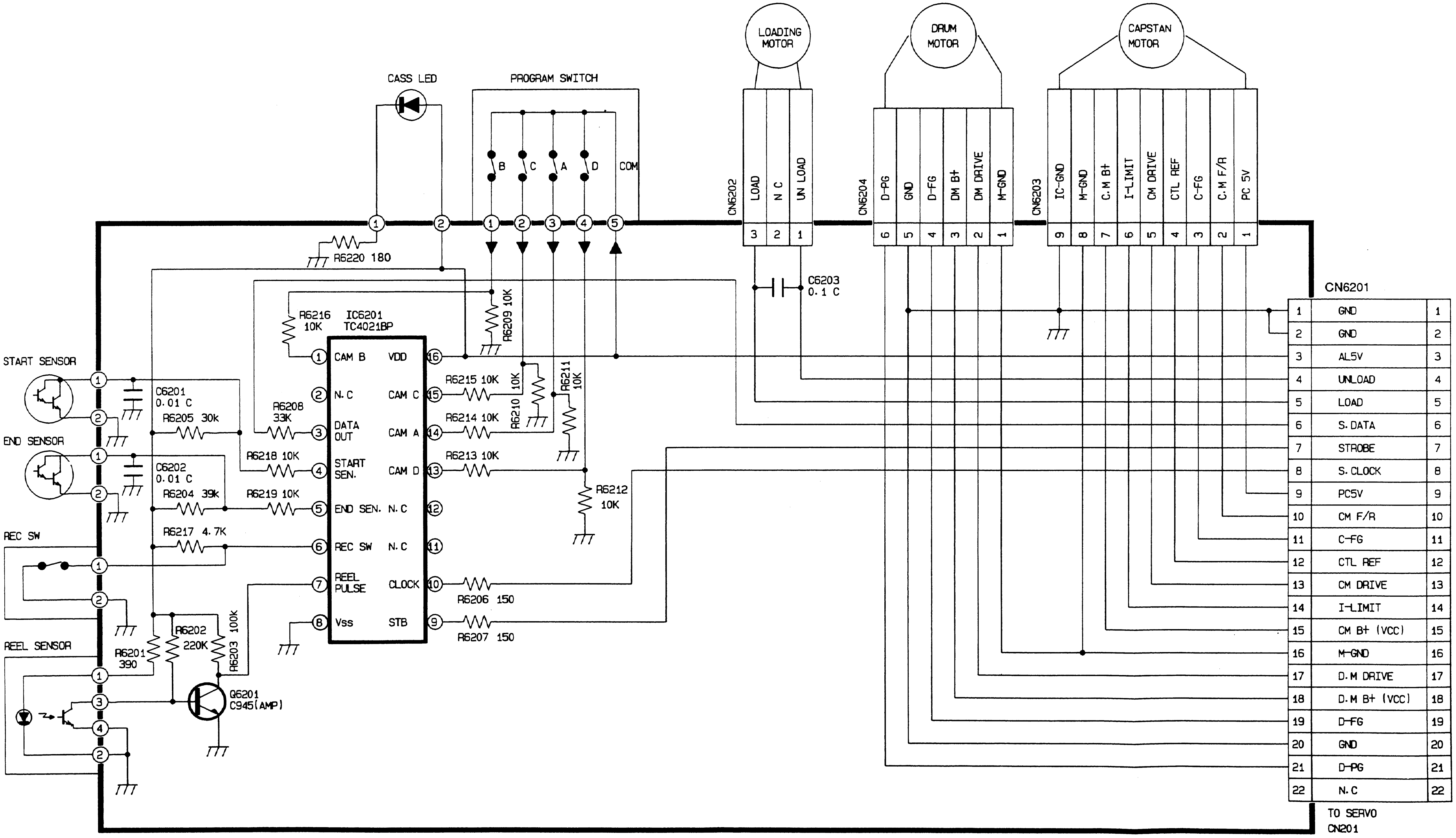
10-15. Deck Joint


LOADING MOTOR
DRUM MOTOR
CAPSTAN MOTOR
CASS LED
PROGRAM SWITCH
B
C
A
D
COM
CN6202
LOAD
N C
UN LOAD
3 2 1
CN6204
D-PG
GND
D-FG
DM B+
DM DRIVE
M-GND
6 5 4 3 2 1
CN6203
IC-GND
M-GND
C.M B+
I-LIMIT
CM DRIVE
CTL REF
C-FG
C.M F/R
PC 5V
9 8 7 6 5 4 3 2 1
R6220 180
C6203 0.1 C
R6216 10K
IC6201 TC4021BP
R6209 10K
CAM B
N.C
DATA OUT
START SEN.
END SEN.
REC SW
REEL PULSE
Vss
VDD
CAM C
CAM A
CAM D
N.C
N.C
CLOCK
STB
R6215 10K
R6214 10K
R6213 10K
R6210 10K
R6211 10K
R6212 10K
R6208 33K
R6218 10K
R6219 10K
R6217 4.7K
R6206 150
R6207 150
START SENSOR
END SENSOR
REC SW
REEL SENSOR
C6201 0.01 C
R6205 30k
C6202 0.01 C
R6204 39k
R6201 390
R6202 220K
R6203 100K
Q6201 C945(AMP)
CN6201
1 GND 1
2 GND 2
3 AL5V 3
4 UNLOAD 4
5 LOAD 5
6 S.DATA 6
7 STROBE 7
8 S.CLOCK 8
9 PC5V 9
10 CM F/R 10
11 C-FG 11
12 CTL REF 12
13 CM DRIVE 13
14 I-LIMIT 14
15 CM B+ (VCC) 15
16 M-GND 16
17 D.M DRIVE 17
18 D.M B+ (VCC) 18
19 D-FG 19
20 GND 20
21 D-PG 21
22 N.C 22
TO SERVO CN201

SPECIAL NOTE
All integrated circuits and many other semiconductor devices are electrostatically sensitive and therefore require the special handling techniques described under the "electrostatically sensitive (ES) devices" section of this service manual.

NOTE
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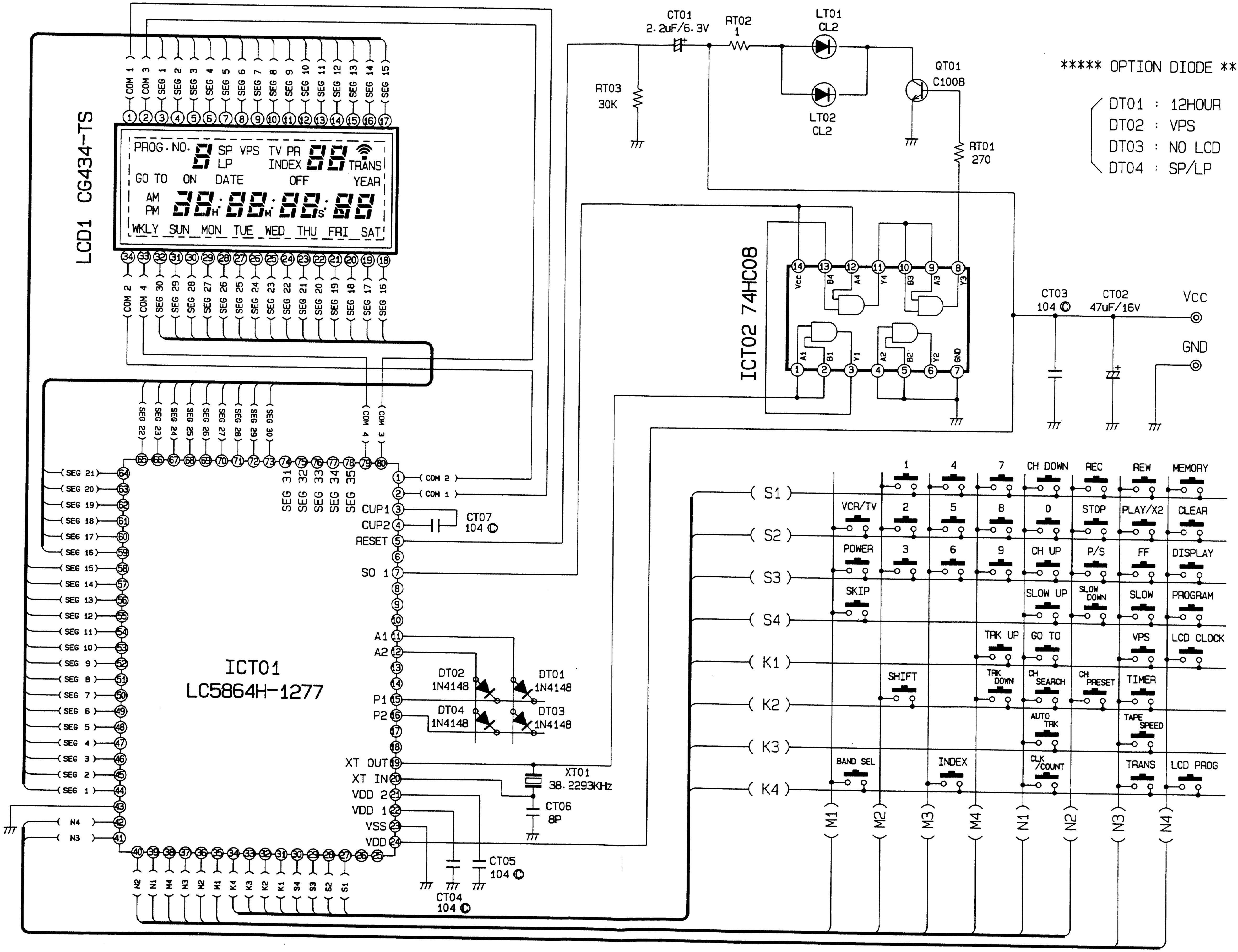
10-16. LCD Remote Control (VR4633)


LCD1 CG434-TS
COM 1
COM 3
SEG 1
SEG 2
SEG 3
SEG 4
SEG 5
SEG 6
SEG 7
SEG 8
SEG 9
SEG 10
SEG 11
SEG 12
SEG 13
SEG 14
SEG 15
PROG. NO.
SP
VPS
TV PR
LP
INDEX
TRANS
GO TO
ON
DATE
OFF
YEAR
AM
PM
WKLY
SUN
MON
TUE
WED
THU
FRI
SAT
COM 2
COM 4
SEG 30
SEG 29
SEG 28
SEG 27
SEG 26
SEG 25
SEG 24
SEG 23
SEG 22
SEG 21
SEG 20
SEG 19
SEG 18
SEG 17
SEG 16
ICT01
LC5864H-1277
SEG 31
SEG 32
SEG 33
SEG 34
SEG 35
CUP1
CUP2
RESET
SO 1
A1
A2
P1
P2
XT OUT
XT IN
VDD 2
VDD 1
VSS
VDD
CT07
104 ©
DT02
1N4148
DT01
1N4148
DT04
1N4148
DT03
1N4148
XT01
38.2293KHz
CT06
8P
CT05
104 ©
CT04
104 ©
N4
N3
N2
N1
M4
M3
M2
M1
K4
K3
K2
K1
S4
S3
S2
S1
CT01
2.2uF/6.3V
RT02
1
LT01
CL2
LT02
CL2
QT01
C1008
RT03
30K
RT01
270
ICT02 74HC08
Vcc
B4
A4
Y4
B3
A3
Y3
A1
B1
Y1
A2
B2
Y2
GND
CT03
104 ©
CT02
47uF/16V
Vcc
GND
***** OPTION DIODE *****
DT01 : 12HOUR
DT02 : VPS
DT03 : NO LCD
DT04 : SP/LP
1
4
7
CH DOWN
REC
REW
MEMORY
VCR/TV
2
5
8
0
STOP
PLAY/X2
CLEAR
POWER
3
6
9
CH UP
P/S
FF
DISPLAY
SKIP
SLOW UP
SLOW DOWN
SLOW
PROGRAM
TRK UP
GO TO
VPS
LCD CLOCK
SHIFT
TRK DOWN
CH SEARCH
CH PRESET
TIMER
AUTO TRK
TAPE SPEED
BAND SEL
INDEX
CLK/COUNT
TRANS
LCD PROG

NOTE
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SPECIAL NOTE
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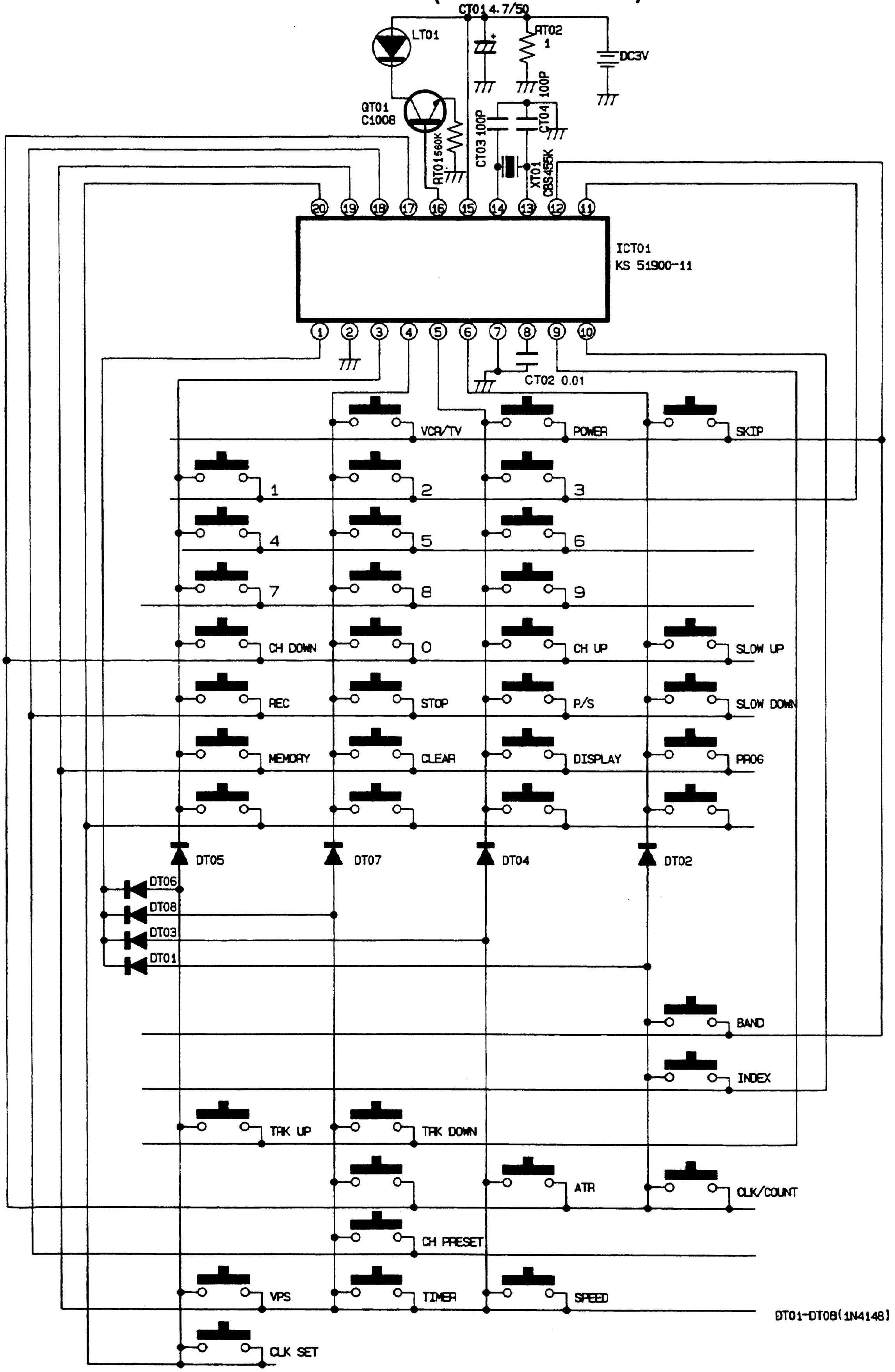
10-17. W/O LCD Remote Control (VR4632/VR4631)


CT01 4.7/50
LT01
RT02
1
DC3V
100P
QT01
C1008
CT03 100P
CT04
RT01 560K
XT01
CBS455K
20
19
18
17
16
15
14
13
12
11
ICT01
KS 51900-11
1
2
3
4
5
6
7
8
9
10
CT02 0.01
VCR/TV
POWER
SKIP
1
2
3
4
5
6
7
8
9
CH DOWN
0
CH UP
SLOW UP
REC
STOP
P/S
SLOW DOWN
MEMORY
CLEAR
DISPLAY
PROG
DT05
DT07
DT04
DT02
DT06
DT08
DT03
DT01
BAND
INDEX
TRK UP
TRK DOWN
ATR
CLK/COUNT
CH PRESET
VPS
TIMER
SPEED
CLK SET
DT01-DT08(1N4148)

NOTE
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SPECIAL NOTE
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